

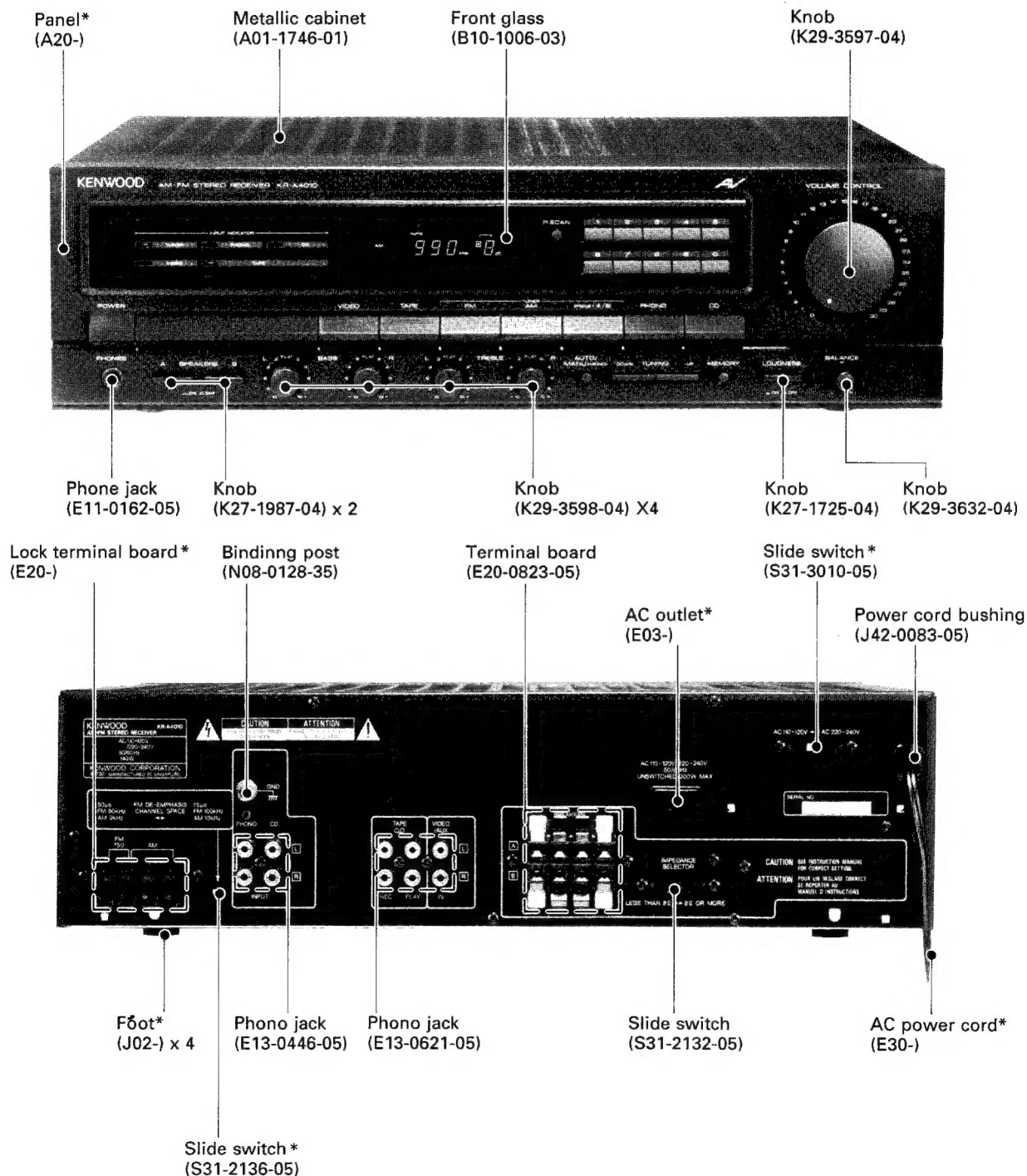
AM/FM STEREO RECEIVER

KR-A4010

SERVICE MANUAL

KENWOOD

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* Refer to parts list on page 38.

KR-A4010

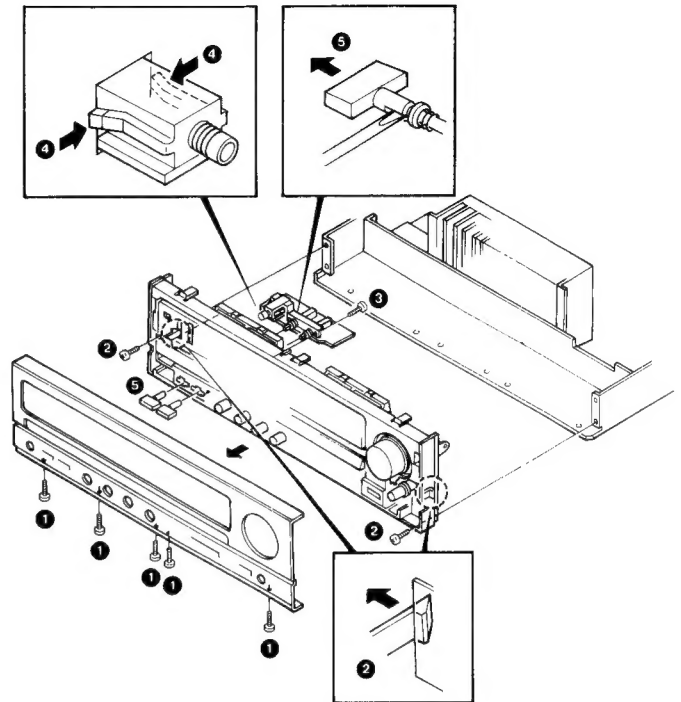
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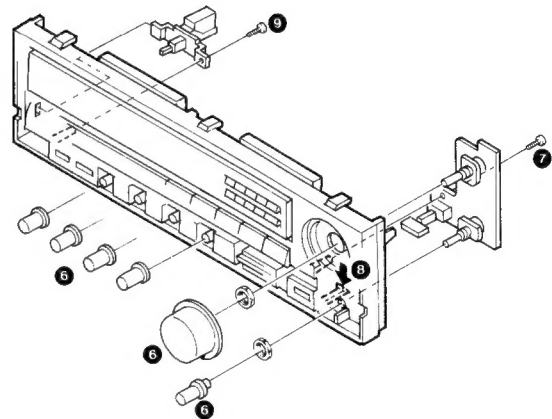
DISASSEMBLY FOR REPAIR

Before repair work, take out the case.

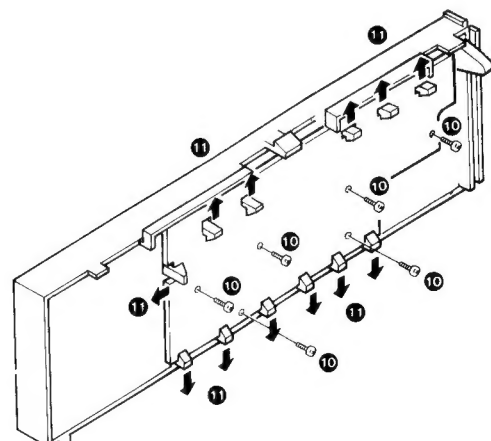
1. Remove the five screws, then detach the front panel (1).
2. Remove the two screws then undo the catch of the sub panel (2).
3. Remove the one screw (3).
4. Undo the catch of the PHONES, then detach the PHONES board (X14-) (B/3) (4).
5. Detach the knob using a screwdriver (5).



6. Undo the catch, then the knob (6).
7. Remove the one screw (7) and the one hook (8), then detach the PCB.
8. Remove the one screw (9), then detach the power switch.



9. Remove the six screws (10) and the twelve screws (11), then detach the display board (X11-) (A/2).

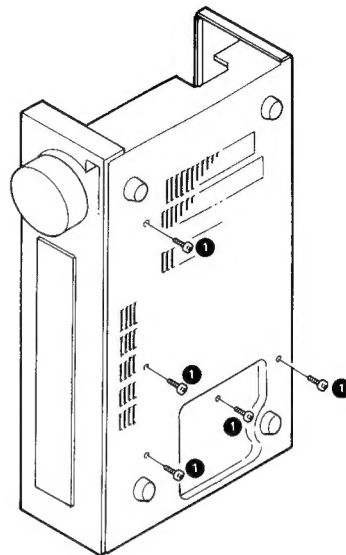


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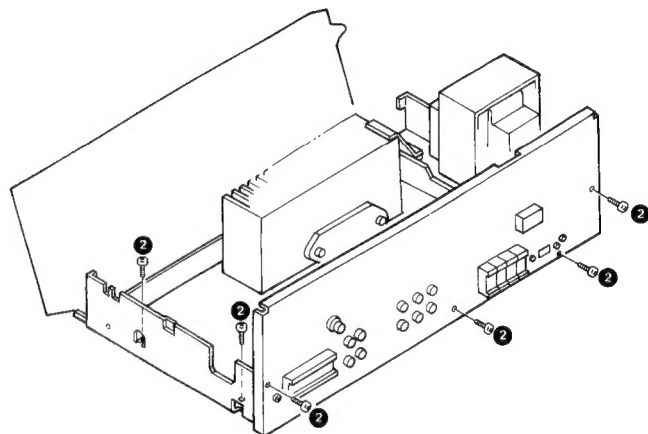
DISASSEMBLY FOR REPAIR

When repairing or checking the main PC board and power supply refer to the following steps.

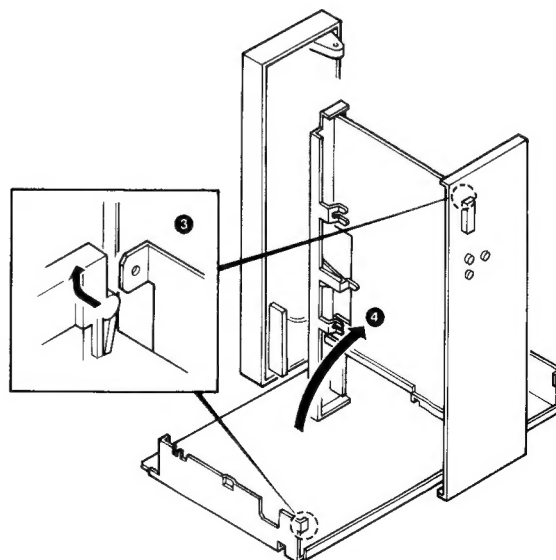
1. Remove the five screws (❶).



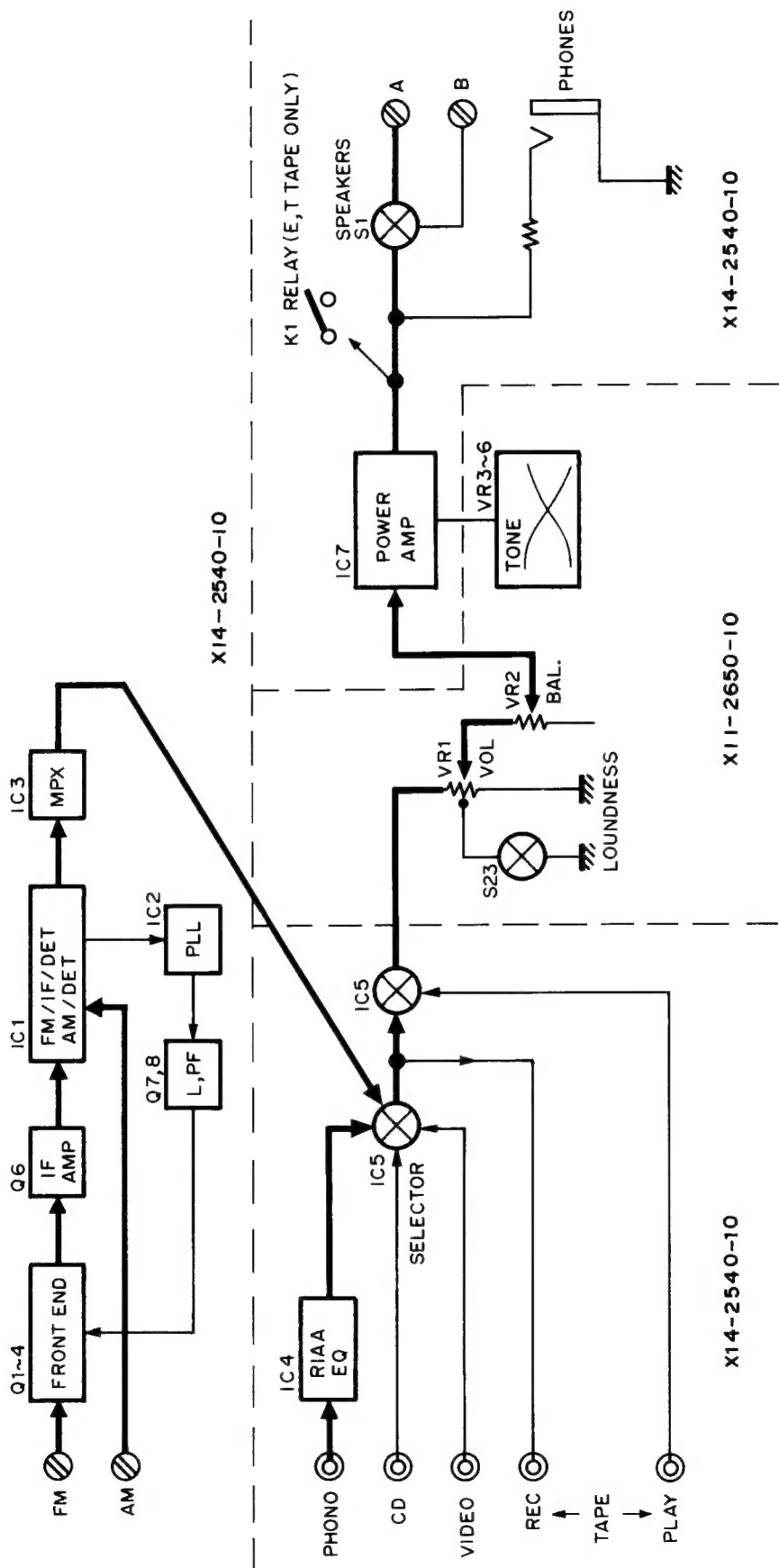
2. Remove the six screws (❷).



3. In this way, the FM terminal mold will hit against the chassis. To avoid this, lift up the main body putting aside the rear panel in the direction of an arrow (❸) (❹).



BLOCK DIAGRAM



CIRCUIT DESCRIPTION

1. Description of Components

CONTROL UNIT (X11-265X-XX) 0-10 : K, P 0-21 : M 2-71 : X, T, E

Ref. No.	Part No.	Use/Function	Operation/Condition/Compatibility
IC1	μPD7538AC-041	Micro computer	
IC2	PST529C	Reset	
Q2	2SA733 (A) (Q,P) 2SA933S (Q,R)	Channel space selection	ON : 9kHz, 50kHz OFF : 10kHz, 100kHz
Q3	2SA733 (A) (Q,P) 2SA933 (Q,R)	Indication driver	TUNED display
Q4	2SA733 (A) (Q,P) 2SA933 (Q,R)	Indication driver	STEREO display
Q5	2SC945 (A) (Q,P) 2SC1740S (Q,R)	LED driver	For PHONO

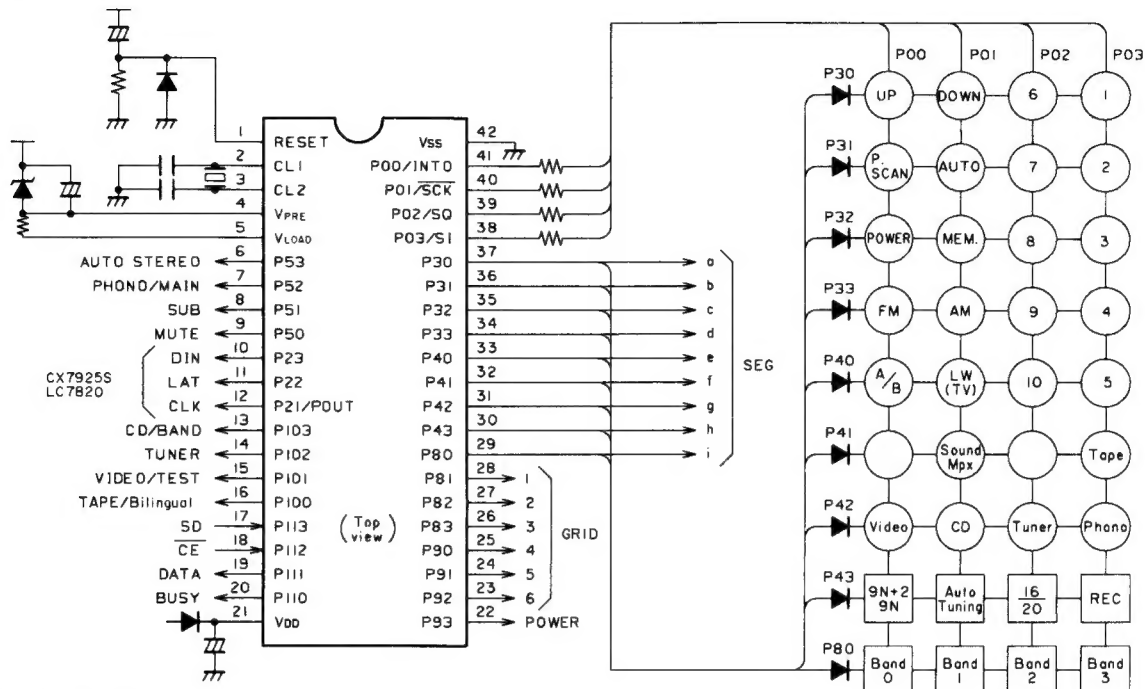
RECEIVER UNIT (X14-254X-XX) 0-10 : K, P 0-21 : M 0-71 : X 2-71 : T, E

Ref. No.	Part No.	Use/Function	Operation/Condition/Compatibility
IC1	LA1265	FM/AM system IC	FM IF amplifier detection and control : AM mixing, IF amplifier and detection.
IC2	CX-79258	PLL IC for frequency synthesizer	PLL for electronic tuning.
IC3	AN7470	MPX IC	MPX demodulator.
IC4	NJM4558D-A M5218P-A	Equalizer amplifier	Equalizer amplifier for PHONO (MM).
IC5	LC7820	Input selector SW	Analog switch for input selector switches.
IC7	STK4172/2	Main amplifier	Main amplifier (2ch). (K,P,M,X type)
IC7	STK4171/5	Main amplifier	Main amplifier (2ch). (T,E type)
IC8	μPC7812HF	Constant voltage power supply	3-pin regulator for the +12V constant voltage supply.
Q1	2SK241	RF amplifier	High-frequency amplifier. (K,P,M,X type)
Q1	2SK73	RF amplifier	High-frequency amplifier. (T,E type)
Q2	2SC1923 (O)	Mixing	Frequency converter.
Q3	2SC1923 (R,O)	OSC	Local oscillator.
Q4	2SC1923 (R,O)	OSC buffer	OSC OUT (oscillator output) for synthesizer.
Q5	2SK161 (Y,GR)	OSC buffer	For local oscillator input to mixer. (T,E type)
Q6	2SC1923 (R,O)	FM IF amplifier	10.7MHz amplifier.
Q7	2SC1845 (F,E)	LPF	Low pass filter for PLL.
Q8	2SC1740S (Q,R) 2SC945 (A) (Q,P)	LPF	Low pass filter for PLL.
Q9	2SC1740S (Q,R) 2SC945 (A) (Q,P)	Buffer	Buffer for L6 (T,E type)
Q10,11	2SC1740S (Q,R) 2SC945 (A) (Q,P)	Emphasis switch	ON for 75μs, OFF for 50μs. (M type)
Q12	DTC124ES	FM + B control	
Q13	DTA114ES	FM + B control	
Q14	DTC124ES	AM + B control	
Q15	DTA114ES	AM + B control	
Q17,18	2SC2878 (B)	Muting	TAPE REC OUT pop noise prevention during switching selector switch.
Q19	2SA933S (Q,R) 2SA733 (A) (Q,R)	Muting control	Main amplifier pop noise prevention during switching selector switch.
Q20,21	2SC2878 (B)	Muting	Main amplifier pop noise prevention during switching selector switch.
Q22	2SA933S (Q,R) 2SA733 (A) (Q,P)	Muting control	
Q25	2SA933S (Q,R) 2SA733 (A) (Q,P)	Muting	Main amplifier pop noise prevention during switching power switch.
Q26,27	2SC1845 (F,E)	Protection	
Q28	2SA945 (L,K)	Regulator power supply	Output transistor for 24V control voltage supply.
Q29	2SA933S (Q,R) 2SA733 (A) (Q,P)	Error amplifier	-12V error amplifier.
Q30	2SA945 (L,K)	Constant voltage circuit	-12V
Q32	2SC2003(L,K)	Regulator power supply	Output transistor for 5V constant voltage supply.

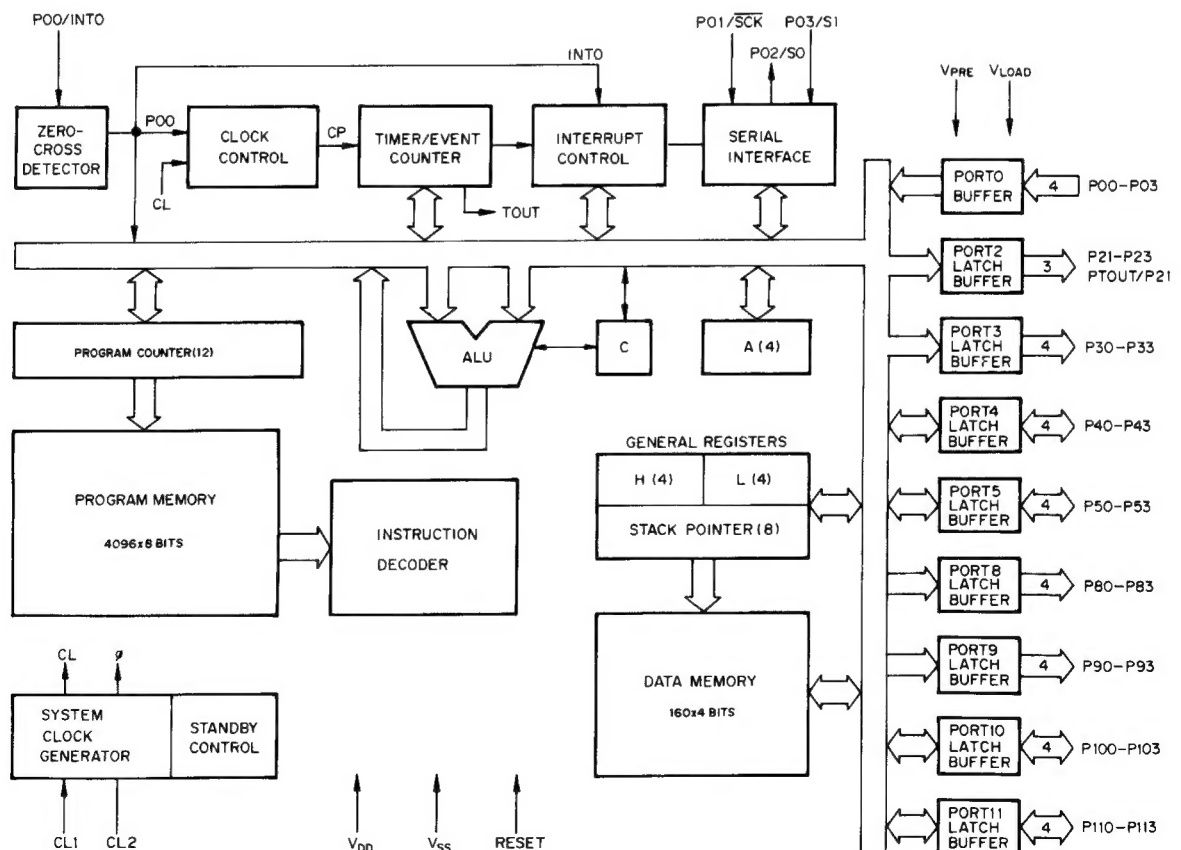
CIRCUIT DESCRIPTION

2. Microprocessor μ PD7538AC-041 (X11-2650-10 : IC1)

Terminal connection diagram & key matrix connection



Block diagram



CIRCUIT DESCRIPTION

Function of the diode switch

1. Models for each designated area and function setting switches

Model for designated area	Set switch				BAND	Receiving frequency range	Channel spacing	Reference frequency	Middle frequency
	Band 3	Band 2	Band 1	Band 0					
K	1	0	0	0	FM	87.5 ~ 108 MHz	100 kHz	50 kHz	10.7 MHz
					AM	530 ~ 1610 MHz	10 kHz	10 kHz	450 kHz
E	1	1	0	1	FM	87.5 ~ 108 MHz	50 kHz	50 kHz	10.7 MHz
					MW	531 ~ 1602 kHz	9 kHz	9 kHz	450 kHz
					LW	153 ~ 281 kHz	1 kHz	1 kHz	450 kHz
M	1	1/0	0	0	FM AM	K type or E type (without LW)			

- Band 3 H Overseas
 L Domestic (Japan)
- Band 2 H FMch space 50 kHz & AMch space 9 kHz
 L FMch space 100 kHz & AMch space 10 kHz
- Band 1 H Without auto tuning function only for LW broadcast
- Band 0 H With LW: Indication (FM, MW, LW)
 L Without LW: Indication (FM, AM)
 LW key is not accepted.

2. Stop frequency select switch for auto tuning in LW reception

This switch is used to set the frequency which intakes the SD signal in LW band reception. For both manual and auto tuning, the tuning frequency is changed up or down in 1 kHz step, however, in auto tuning mode, the receiving frequency stops at the following frequency selected by this switch.

● Setting of this switch can be changed without resetting (unplugging/plugging the AC cord.)

9N+2 /9N	Frequency range	Channel spacing	Reference frequency	Middle frequency	Stop frequency
1	153 ~ 281 kHz	1 kHz	1 kHz	450 kHz	155, 164 272, 281 kHz
0	153 ~ 281 kHz	1 kHz	1 kHz	450 kHz	153, 162 270, 279 kHz

3. Auto tuning

Auto tuning	Auto tuning function	Auto/Mono KEY
1	Not available	Mono/Stereo function only
0	Available	This key is also used as the Auto/Manual tuning mode key.

4. Others

Set switch	Function
0	Preset 16
1	Preset 20

CIRCUIT DESCRIPTION

Port allocation

Port		Pin No.	I/O Mode	Active Mode	Function
P0	0	41	I	H	Key return signal input
	1	40	I	H	Key return signal input
	2	39	I	H	Key return signal input
	3	38	I	H	Key return signal input
P2	1	12	O	H	PLL IC (CX7925B) Function SW (LC7820) Data output
	2	11	O	H	PLL IC (CX7925B) LAT output
	3	10	O	H	PLL IC (CX7925B) Function SW (LC7820) CLK output
P3	0	37	O	H	Key strobe signal output, FL display segment output: a
	1	36	O	H	Key strobe signal output, FL display segment output: b
	2	35	O	H	Key strobe signal output, FL display segment output: c
	3	34	O	H	Key strobe signal output, FL display segment output: d
P4	0	33	O	H	Key strobe signal output, FL display segment output: e
	1	32	O	H	Key strobe signal output, FL display segment output: f
	2	31	O	H	Key strobe signal output, FL display segment output: g
	3	30	O	H	Key strobe signal output, FL display segment output: h
P8	0	29	O	H	Key strobe signal output, FL display segment output: i
	1	28	O	H	FL display digit control pin: GRID 1
	2	27	O	H	FL display digit control pin: GRID 2
	3	26	O	H	FL display digit control pin: GRID 3
VDD		21	—	—	Power supply input pin (5V)
VSS		42	—	—	GND
P9	0	25	O	H	FL display digit control pin: GRID 4
	1	24	O	H	FL display digit control pin: GRID 5
	2	23	O	H	FL display digit control pin: GRID 6
	3	22	O	H	Power pin
P10	0	16	O	H	Input port: TV mode "Bilingual" pin (H) Output port: Receiver selector "TAPE"
	1	15	O	H	Input port: TEST pin (H) Output port: Receiver selector "VIDEO"
	2	14	O	H	Receiver selector "TUNER"
	3	13	O	H	Receiver design: Receiver selector "CD" System component design: Band data output (UHF: H)
P11	0	20	I/O	H	Serial signal BUSY pin
	1	19	I/O	H	Serial signal DATA pin
	2	18	I	L	Back up detection pin
	3	17	I	H	Station detection pin for auto tuning mode
P5	0	9	O	H	Muting signal
	1	8	O	H	TV SUB pin
	2	7	O	H	Receiver design: Receiver selector "PHONO" System component design: TV MAIN pin
	3	6	O	H	MONO/ST key to control Stereo (L) Mono (H)
RESET		1	I	H	Reset signal
CL1		2	—	—	Clock
CL2		3	—	—	Clock
VPRE		4	—	—	Power supply for FL display pre-driver
VLOAD		5	—	—	Power supply for FL display driver (–30V)

CIRCUIT DESCRIPTION

Key matrix layout

Input Output	P00 (41)	P01 (40)	P02 (39)	P03 (38)
P30 (37)	UP	DOWN	6	1
P31 (36)	Preset Scan	AUTO MONO	7	2
P32 (35)	Power	Memory	8	3
P33 (34)	FM	AM	9	4
P40 (33)	A/B	LW (TV)	10	5
P41 (32)		Sound multiplex		Tape
P42 (31)	Video	CD	Tuner	Phono
P43 (30)	9N + 2 9N	*Auto tuning	*16 Preset 20 Preset	*Syscon Receiver
P80 (29)	*Band 0	*Band 1	*Band 2	*Band 3

- Values in brackets () shows the pin number of microcomputer.
- Items with an asterisk (*) shows the diode switch. Others are momentary switches.
- LW (9N+2/9N) is the slide switch on the rear panel.
- Key-intake is active high.

Tuner function

1. Manual tuning

Each time the UP/DOWN key is pressed, the tuning frequency is varied one step higher or lower. When this key is kept pressed for more than 0.5 seconds, the frequency is changed up or down at approx. 128 msec/step (approx. 224 msec/step for TV reception) until the key is released.

2. Auto tuning

When the AUTO/MONO switch is set to AUTO, pressing the UP/DOWN key starts auto tuning. The tuning frequency is changed up or down at approx. 128 msec/step (approx. 224 msec/step for TV reception) until the high-level signal is input to the SD pin. When the high-level signal is input, auto tuning operation stops.

3. Preset memory

Up to 16 or 20 frequencies (the maximum number of preset stations is set by the diode switch) can be preset randomly for FM, MW (AM) and LW (TV) stations.

a) How to preset

When the MEMORY key is pressed, the "MEMORY" indicator lights and the unit is set to the write-enable status. Writing to memory is possible for approx. 5 seconds after the MEMORY key is pressed. During this time, pressing any of the numeric key (1 – 10) will write the currently-received frequency into memory corresponding to the key pressed.

b) How to recall

When the tuner functions, pressing any of the preset keys will recall the stored contents corresponding to the key pressed.

4. Preset scan

When the PRESET SCAN key is pressed, the SD pin goes high level. A preset channel is received for 5

Test frequency

Type	Preset Ch	1	2	3	4	5	6	7	8
K	A	FM							
		87.5	89.1	98.0	106.0	108.0	87.5	87.5	87.5
	B	AM							
		530	630	990	1440	1610	87.5	87.5	87.5
E	A	FM				AM			
		87.5	89.1	98.0	106.0	108.0	531	630	990
	B	AM		LW				FM	
		1440	1602	153	162	216	270	281	87.5

● Test mode set-up :

Set the test pin (P15) to high level, and invert it to low level after turning the power ON. (The entire FL display will light except for MEMORY.)

seconds, then the receiving frequency is changed to the next preset channel. When the SD pin is low level, the receiving channel is changed to the next preset channel after one second.

a) Key processing during scanning

- Preset key: Stops the scanning operation and receives the frequency of the designated preset channel.
- UP/DOWN key: Stops the scanning operation and processes the UP/DOWN function.

CIRCUIT DESCRIPTION

Function of tact switches

Name	Function																
POWER	Power ON/OFF key. Each time this key is pressed, the Power pin is inverted. When the POWER switch is turned ON, the Power pin goes high level and the last channel (which is received when the power switch is turned off) is recalled. When the POWER switch is turned OFF, the Power pin goes low level and no indication will be displayed.																
FM AM (MW) LW (TV)	Band select key for FM, AM (MW) and LW (TV). The reference data and the program data corresponding to the selected band will be transmitted to the PLL IC. However, if the band which is the same as that currently selected is selected, the command is not accepted.																
UP DOWN	Frequency up/down key. <ul style="list-style-type: none">● Auto tuning When this key is pressed, the frequency is changing to the higher or lower scale at approx. 128 msec/step in the square mode. When the high-level signal is input to the SD pin, auto tuning operation is stopped and that frequency is received.● Manual tuning Each time this key is pressed, the frequency is changed up/down by one step (channel spacing). When it is kept pressed for more than 0.5 seconds, the frequency is changed at approx. 128 msec/step until the key is released.																
Numeric keys (1 – 8) (numeric keys (1 – 10) for 20-memory model) MEMORY	<ul style="list-style-type: none">● Write key (during Memory indicator is lit). During approx. 5 seconds after the MEMORY key is pressed, pressing any of the numeric keys 1 – 8 (or 1 – 10) will write the frequency and the band which are currently received into the memory corresponding to the key pressed.● Recall (when Memory indicator is not lit) When any of the numeric keys 1 – 8 (or 1 – 10) is pressed, the memorized contents (band and frequency) corresponding to the key pressed will be recalled. When the VDD signal is initially input, the lowest frequency in the preset memories will be recalled for each band.																
AUTO	Auto/Mono select key for FM broadcast. Each time this key is pressed, the FM reception mode alternates between Auto and Mono. The Auto indicator lights and the Auto/Mono pin is inverted. <ul style="list-style-type: none">● When auto tuning is available, this key is also used for the auto/manual tuning mode select key.● When this key is pressed during auto tuning, auto tuning operation stops and the manual tuning mode resumes.																
Preset Scan	When this key is pressed, the preset channel (1 – 8 or 1 – 10) is scanned sequentially. When the receiving frequency is stored in memory, its contents (frequency and band) is recalled and received for approx. 5 seconds, then the next channel is received. When the receiving frequency is not stored in memory, the next channel is received after 1 second.																
MAIN SUB	Sub Audio Program (bilingual audio channel) mode select key for TV broadcast (MAIN/SUB/BOTH). Each time the key is pressed, the SAP mode is changed in the order MAIN → SUB → BOTH, then MAIN resumes. The indication and the pin status for each mode are as follows: <table><tr><th>Mode</th><th>Indication</th><th>Port (Main)</th><th>Port (Sub)</th></tr><tr><td>MAIN</td><td>MAIN</td><td>H</td><td>L</td></tr><tr><td>SUB</td><td>SUB</td><td>L</td><td>L</td></tr><tr><td>BOTH</td><td>MAIN SUB</td><td>L</td><td>H</td></tr></table> <p>This key is effective only when the band is set to the TV position. When set to another position, the MAIN or SUB indication will go off.</p>	Mode	Indication	Port (Main)	Port (Sub)	MAIN	MAIN	H	L	SUB	SUB	L	L	BOTH	MAIN SUB	L	H
Mode	Indication	Port (Main)	Port (Sub)														
MAIN	MAIN	H	L														
SUB	SUB	L	L														
BOTH	MAIN SUB	L	H														

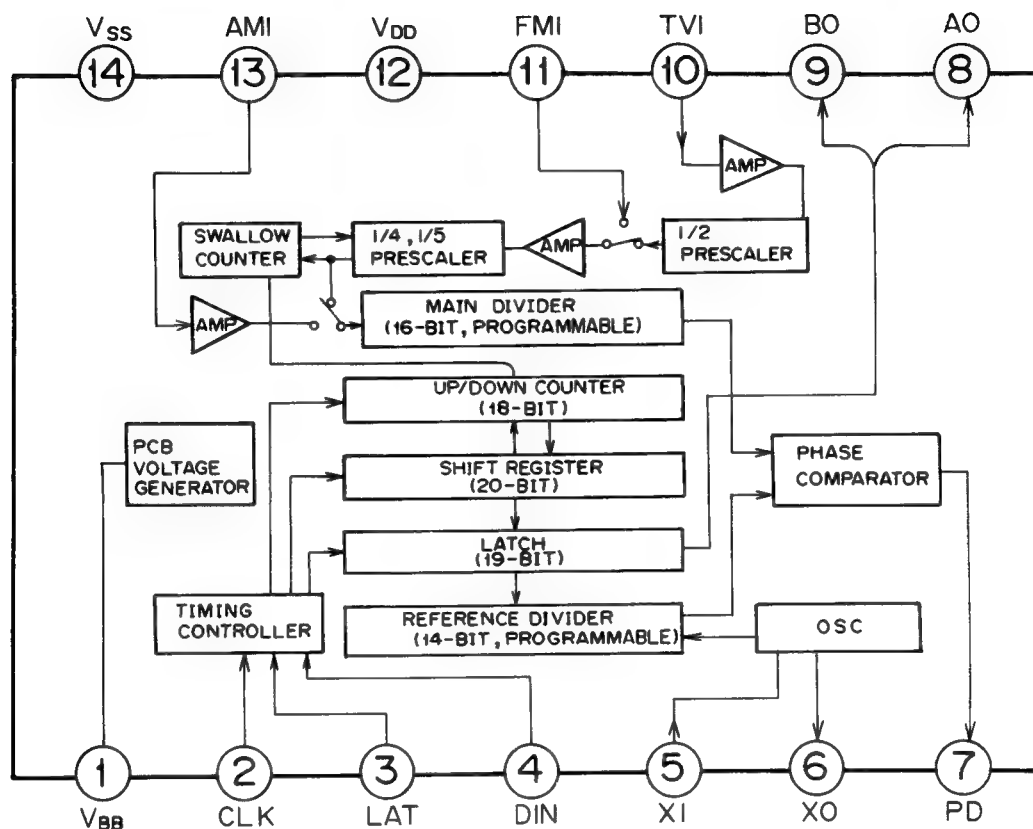
CIRCUIT DESCRIPTION

Name	Function
A/B	Each time the key is pressed, the preset group is alternated between A preset (1 – 8 or 1 – 10) and B preset (1 – 8 or 1 – 10) for recalling or storing. When pressed in the memory write mode, the writing time is set to 5 seconds after pressing the key.
TUNER CD PHONO VIDEO	Used only when the unit is set to the receiver mode. By pressing any of these select keys, the data is transmitted to the Selector IC and the input source is changed. <ul style="list-style-type: none">● Keys related with the Tuner (except for the Preset and Band keys) are not accepted other than when the input selector is set to TUNER.● When any input source other than TUNER is selected, pressing the Band key or Preset key will change the selector to TUNER.● When the input selector which is the same as the current source is selected, muting does not function.
TAPE	Tape monitor key. <ul style="list-style-type: none">● When pressed, the input source indicator LED (TUNER, CD, PHONO or VIDEO) is not changed but the Selector IC is changed.● When the Preset Scan or Frequency Scan is engaged with the selector TUNER selected, pressing this key does not stop the scanning operation.

CIRCUIT DESCRIPTION

3. PLL CX7925B (X14-2540-10 : IC2)

Block diagram and terminal configuration diagram



Terminal description

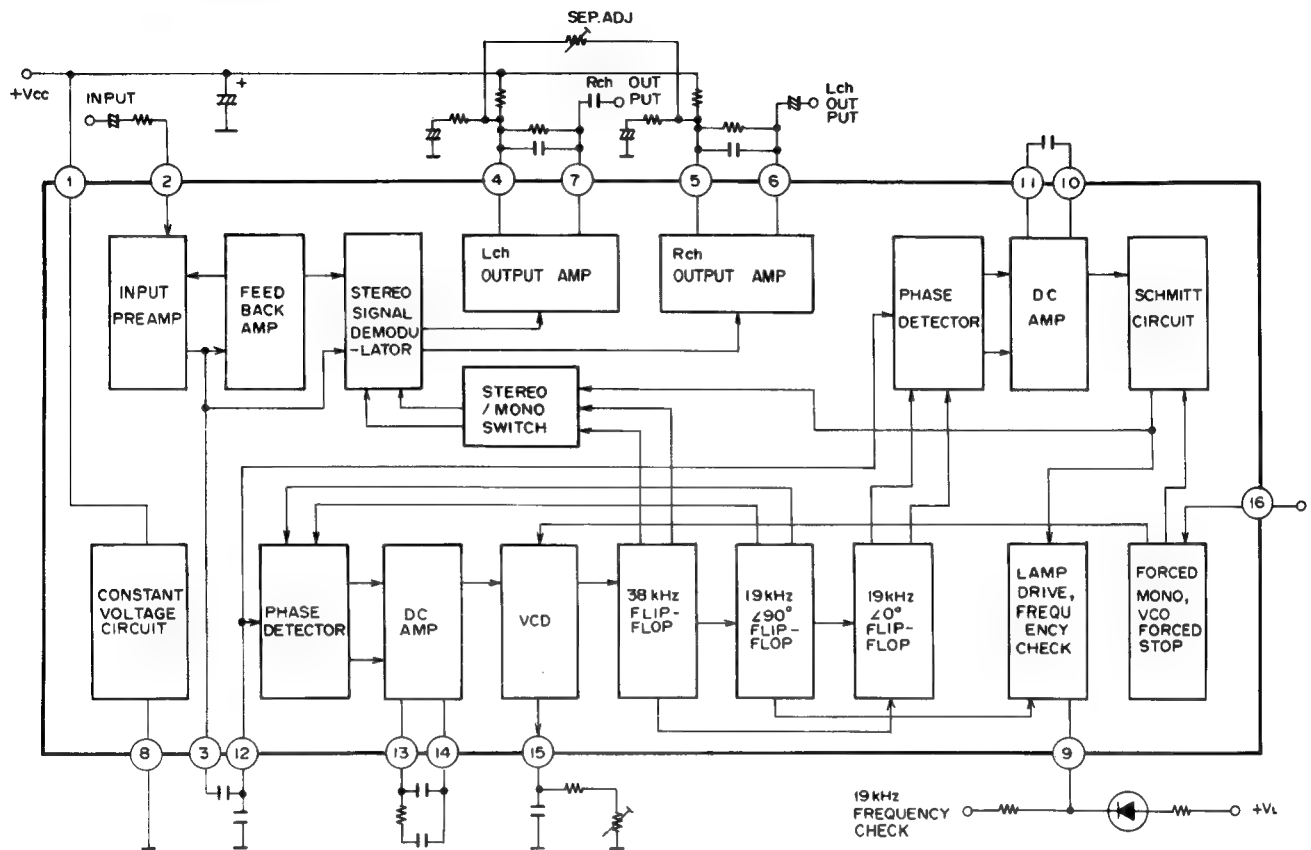
Terminal No.	Symbol	Terminal Description
1	VBB	PCB terminal (Connect a 0.01 μ F capacitor between the GND).
2	CLK	Input terminal for the clock used for 20-bit serial data input (Shifted at the rise).
3	LAT	Input terminal for the shift register input data latch signal (shifted at the rise) and, at the same time, for the Up/Down clock (status changed at the rise).
4	DIN	Data input terminal, also the Up/Down mode switching terminal (Up mode with "H" level, Down mode with "L" level).
5	XI	Connection terminals for the reference signal generator X'tal oscillator. (Max. 13 MHz, standard 4.0 MHz)
6	XO	
7	PD	Phase comparator output terminal (3-state).
8	AO	External control signal output terminal/Unlock signal output terminal (E/E MOS push-pull).
9	BO	External control signal output terminal/data check terminal (E/E MOS push-pull).
10	TVI	High-frequency signal input terminal (300 MHz or 350 MHz max.). With 1/2 prescaler.
11	FMI	High-frequency signal input terminal (150 MHz or 180 MHz max.).
12	VDD	Power supply (+5V).
13	AMI	High-frequency signal input terminal (40 MHz or 50 MHz max.).
14	VSS	Grounding terminal

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CIRCUIT DESCRIPTION

4. FM MPX AN7470 (X14-2540-10 : IC3)

Equivalent block diagram



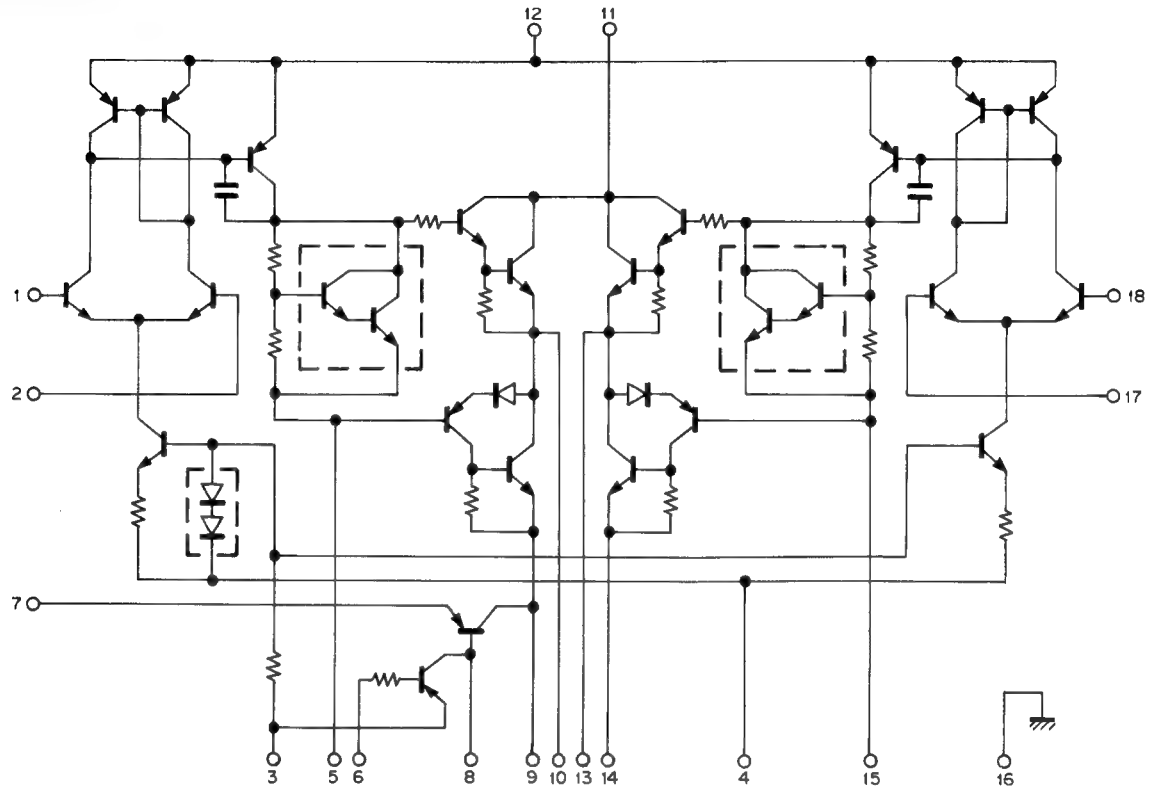
Terminal connection and functions

Terminal No.	Connection/Function
1	Supply voltage (+Vcc)
2	Stereo composite signal, input terminal
3	Input preamp, output terminal
4	L CH output amp, feedback terminal
5	R CH output amp, feedback terminal
6	R CH output amp, output terminal
7	L CH output amp, output terminal
8	Grounding terminal
9	Stereo display lamp drive and 19 kHz frequency check terminal
10	Stereo signal detector circuit, low-pass filter terminal
11	Stereo signal detector circuit, low-pass filter terminal
12	PLL circuit, input terminal
13	PLL circuit, low-pass filter terminal
14	PLL circuit, low-pass filter terminal
15	VCO freerun oscillation frequency adjustment terminal
16	Forced mono/forced VCO oscillation stop terminal

CIRCUIT DESCRIPTION

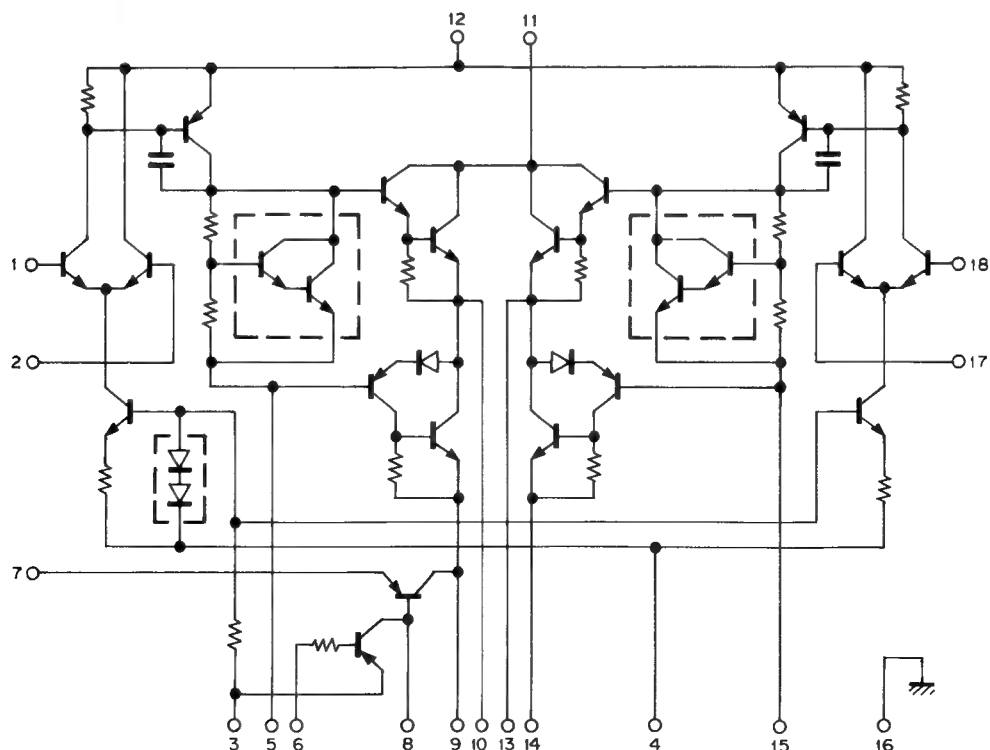
5. STK4171/5 : Main amplifier (X14-2542-71 : IC7) : T, E, type

Equivalent circuit



6. STK4172/2 : Main amplifier (X14-2540-XX : IC7) : K, P, M, X type

Equivalent circuit



ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION Unless otherwise specified, the individual switches should be set as following: SELECTOR: FM MODE: FM MODE/AUTO							
1	BAND EDGE (1)	—	Connect a DC voltmeter between TP 6 (VT) and TP 5 (GND).	87.5MHz	L7 (Front end)	2.5V	(a)
2	BAND EDGE (2)	—	Connect a DC voltmeter between TP 6 (VT) and TP 5 (GND).	108.0MHz	TC1 (Front end)	8.0V	(a)
Repeat alignments 1 and 2 several times.							
3	RF ALIGNMENT	(A) 98.0MHz 1kHz, ± 75 kHz dev	(B)	MONO 98.0MHz	L2-4 (Front end)	Maximum amplitude and symmetry of the oscilloscope display.	
4	DISCRIMINATOR	(A) 98.0MHz 1kHz, ± 75 kHz dev 60dB μ (ANT input)	Connect a DC voltmeter between TP 3 and TP 4.	MONO 98.0MHz	L14	0V	(b)
5	VCO	(A) 98.0MHz 0 dev 60dB μ (ANT input)	Connect a 330k Ω resistor to TP 1. Connect a frequency counter to the resistor via an AC voltmeter.	98.0MHz	VR 3	76.00kHz	(c)
6	DISTORTION (STEREO)	(C) 98.0MHz 1kHz, ± 68.25 kHz dev Selector: L or R 60dB μ (ANT input)	(B)	98.0MHz	L8 (Front end)	Minimum distortion. (L or R)	
7	SEPARATION	(C) 98.0MHz 1kHz, ± 68.25 kHz dev Selector: L or R Pilot: ± 6.75 kHz dev 60dB μ (ANT input)	(B)	98.0MHz	VR4	Minimum crosstalk. A compromise adjustment may be required if left-to-right and right-to-left separations are unequal.	
8	TUNING LEVEL	(A) 98.0MHz 0 dev 18dB μ (ANT input)	—	98.0MHz	VR1	Adjust VR1 so that FL1(TUNED) goes off. Then, adjust VR1 and stop at the point where FL1(TUNED) goes on.	
AM SECTION Keep the AM loop antenna installed. SELECTOR: AM							
(1)	BAND EDGE (1)	—	Connect a DC voltmeter between TP 6 (VT) and TP 5 (GND).	530kHz (531kHz)	L11	1.5V	(a)
(2)	BAND EDGE (2)	—	Connect a DC voltmeter between TP 6 (VT) and TP 5 (GND).	1610kHz (1602kHz)	TC 3	8.0V	(a)
Repeat alignments (1) and (2) several times.							
(3)	RF ALIGNMENT (1)	(D) 630kHz 400Hz, 30% mod	(B)	630kHz	L10	Maximum amplitude and symmetry of the oscilloscope display.	
(4)	RF ALIGNMENT (2)	(D) 1440kHz 400Hz, 30% mod	(B)	1440kHz	TC2	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (3) and (4) several times.							
(5)	TUNING LEVEL	(A) 1000(999)kHz 0 dev 26 dB μ (ANT input)	—	1000(999)kHz	VR 2	Adjust VR 2 so that FL1(TUNED) goes off. Then, adjust VR4 and stop at the point where FL1(TUNED) goes on.	
(6)	IF TRANSFORMER	(D) 1000kHz 20dB μ (ANT input)	(B)	—	L13 (X14)	Maximum amplitude and symmetry of the oscilloscope display.	

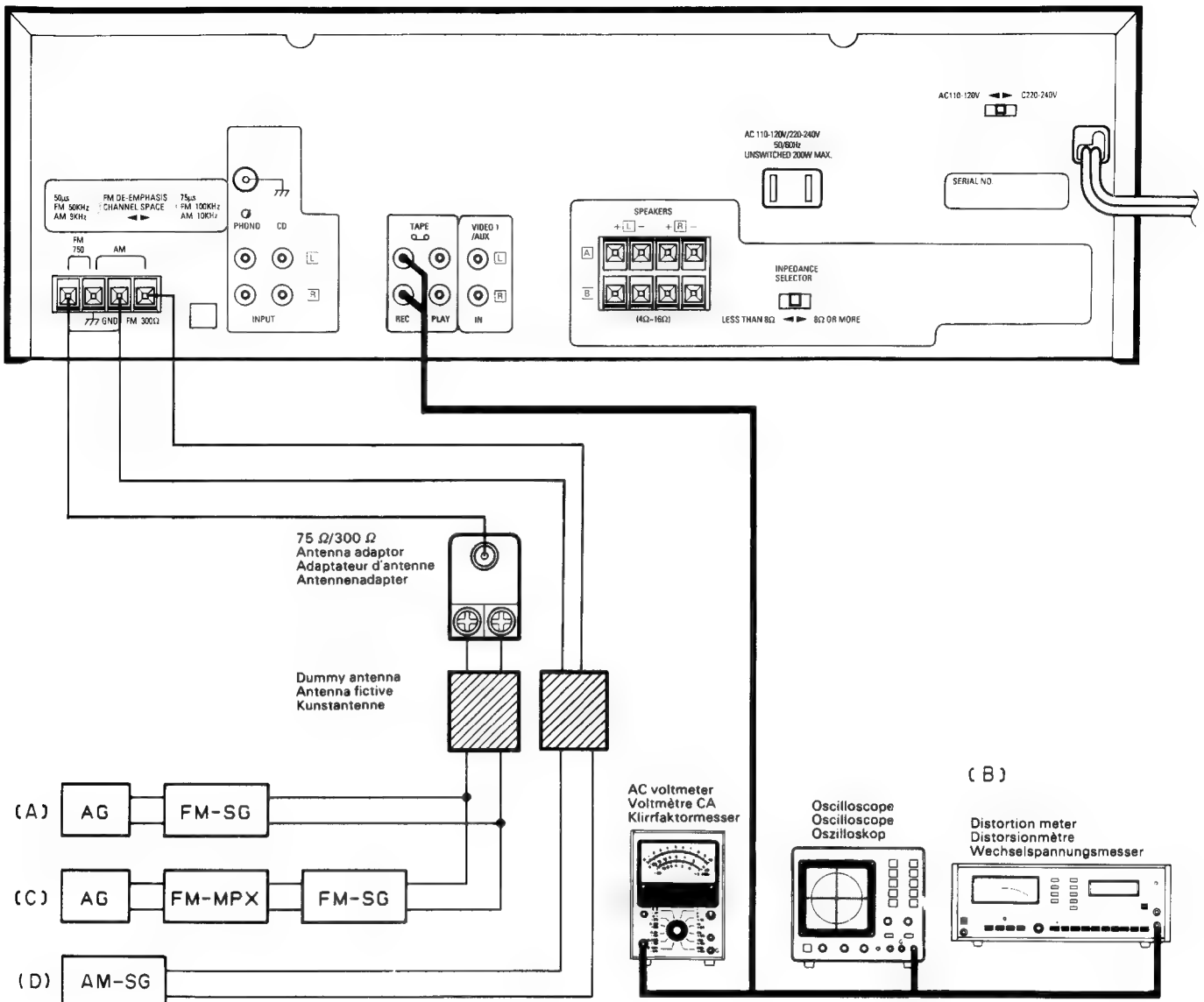
REGLAGES

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION MF							
Sauf en cas d'indications spéciales, régler chaque commutateur comme suit: SELECTEUR: FM MODE: FM MODE/AUTO							
1	BORD DE BANDE (1)	—	Relier un voltmètre CC entre les TP 6 (VT) et TP 5 (GND).	87,5MHz	L7 (Contrôle)	2,5V	(a)
2	BORD DE BANDE (2)	—	Relier un voltmètre CC entre les TP 6 (VT) et TP 5 (GND).	108,0MHz	TC1 (Contrôle)	8,0V	(a)
Répéter les points 1 et 2 plusieurs fois.							
3	ALIGNEMENT HT	(A) 98,0MHz 1kHz. ± 75 kHz dév	(B)	MONO 98,0MHz	L2-4 (Contrôle)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
4	DISCRIMINATEUR	(A) 98,0MHz 1kHz. ± 75 kHz dév 60dB μ (Entrée ANT)	Relier un voltmètre CC entre les TP 3 et TP 4.	MONO 98,0MHz	L14	0V	(b)
5	VCO	(A) 98,0MHz 0 dév 60dB μ (Entrée ANT)	Relier une résistance de 330k Ω à TP1. Raccorder un compteur de fréquence à une résistance par l'intermédiaire d'un voltmètre CA.	98,0MHz	VR 3	76,00kHz	(c)
6	DISTORSION (STEREO)	(C) 98,0MHz 1kHz. $\pm 68,25$ kHz dév Selection: L ou R 60dB μ (Entrée ANT)	(B)	98,0MHz	L8 (Contrôle)	Distorsion minimale. (L ou R)	
7	SEPARATION	(C) 98,0MHz 1kHz. $\pm 68,25$ kHz dév Selection: L ou R Signal pilote: $\pm 6,75$ kHz dév 60dB μ (Entrée ANT)	(B)	98,0MHz	VR 4	Diaphonie minimale. Un compromis de réglage peut être nécessaire s'il y a séparation de gauche à droite et droite à gauche sont inégales.	
8	NIVEAU D' ACCORDER	(A) 98,0MHz 0 dév 18dB μ (Entrée ANT)	—	98,0MHz	VR 1	Ajuster VR1 que FLI(TUNED) est non allumé. Alors, ajuster VR1 et arrêter le mouvement de VR1 au moment où le FLI(TUNED)s'allume.	
SECTION MA							
Laisser l'antenne bouche MA installée. SELECTEUR: AM							
(1)	BORD DE BANDE (1)	—	Relier un voltmètre CC entre les TP 6 (VT) et TP 5 (GND).	530kHz (531kHz)	L11	1,5V	(a)
(2)	BORD DE BANDE (2)	—	Relier un voltmètre CC entre les TP 6 (VT) et TP 5 (GND).	1610kHz (1602kHz)	TC 3	8,0V	(a)
Répéter les points (1) et (2) plusieurs fois.							
(3)	ALIGNEMENT HT (1)	(D) 630kHz 400Hz. 30% mod	(B)	630kHz	L10	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(4)	ALIGNEMENT HT (2)	(D) 1440kHz 400Hz. 30% mod	(B)	1440kHz	TC 2	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les points (3) et (4) plusieurs fois.							
(5)	NIVEAU D' ACCORDER	(A) 1000(999)kHz 0 dév 25 dB μ (Entrée ANT)	—	1000(999)kHz	VR 2	Ajuster VR2 que FLI(TUNED) est non allumé. Alors, ajuster VR4 et arrêter le mouvement de VR4 au moment où le FLI(TUNED)s'allume.	
(6)	TRANSFORMATEUR F.I.	(D) 1000KHz 200dB μ (Entrée ANT)	(B)	—	L13 (X14)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	

ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
UKW-EMPfangSABTEILUNG Außer wenn anders angegeben, die verschiedenen Schalter wie folgt einstellen: SELECTOR: FM MODE:FM MODE/AUTO							
1	BANDKANTE (1)	—	Einen Gleichspannungsmesser zwischen TP 6 (VT) und TP 5 (GND) anschließen.	87,5MHz	L7 (Eingangsstufe)	2,5V	(a)
2	BANDKANTE (2)	—	Einen Gleichspannungsmesser zwischen TP 6 (VT) und TP 5 (GND) anschließen.	108,0MHz	TC1 (Eingangsstufe)	8,0V	(a)
Abstimmungen 1 und 2 mehrere Male wiederholen.							
3	EMPfangS-BEREICH-ABSTIMMUNGEN	(A) 98,0MHz 1kHz. ±75kHz Hub	(B)	MONO 98,0MHz	L2-4 (Eingangsstufe)	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
4	DISKRIMINATOR	(A) 98,0MHz 1kHz. ±75kHz Hub 60dBμ(ANT-Eingang)	Einen Gleichspannungsmesser zwischen TP 3 und TP 4 anschließen.	MONO 98,0MHz	L14	0V	(b)
5	SPANNUNGSGEREGLTER OZILLATOR	(A) 98,0MHz 0 Hub 60dBμ(ANT-Eingang)	Einen 330kΩ Widerstand zu TP1 anschließen. Einen Frequenzzähler über einen Wechselspannungsmesser an den Widerstand anschließen.	98,0MHz	VR 3	76,00kHz	(c)
6	KLIRRFAKTOR (STEREO)	(C) 98,0MHz 1kHz. ±68,25kHz Hub Wähler: L oder R 60dBμ(ANT-Eingang)	(B)	98,0MHz	L8 (Eingangsstufe)	Minimal Klirrfaktor. (L oder R)	
7	STEREO KANAL TRENNUNG	(C) 98,0MHz 1kHz. ±68,25kHz Hub Wähler: L oder R Pilotten: ±6,75kHz Hub 60dBμ(ANT-Eingang)	(B)	98,0MHz	VR 4	Minimales Übersprechen. Eine Ausgleichregelung kann notwendig sein, falls links-zu-rechts und rechts-zu-links. Trennungen ungleich sind.	
8	ABSTIMM PEGEL	(A) 98,0MHz 0 Hub 18dBμ(ANT-Eingang)	—	98,0MHz	VR1	Den Pegelwiderstand VR1 so einstellen, daß der FLI(TUNED)anzeiger nicht leuchtet. Dann der Pegelwiderstand aufdrehen, und den VR1 Halt geben wobei den FLI(TUNED)anzeiger leuchtet wird.	
MW-EMPfangSABTEILUNG Die MW Rahmenantenne angebracht lassen. SELECTOR: AM							
(1)	BANDKANTE (1)	—	Einen Gleichspannungsmesser zwischen TP 6 (VT) und TP 5 (GND) anschließen.	530kHz (531kHz)	L11	1,5V	(a)
(2)	BANDKANTE (2)	—	Einen Gleichspannungsmesser zwischen TP 6 (VT) und TP 5 (GND) anschließen.	1610kHz (1602kHz)	TC 3	8,0V	(a)
Abstimmungen (1) und (2) mehrere Male wiederholen.							
(3)	HF-ABGLEICH (1)	(D) 630kHz 400Hz. 30% mod	(B)	630kHz	L10	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
(4)	HF-ABGLEICH (2)	(D) 1440kHz 400Hz. 30% mod	(B)	1440kHz	TC2	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen (3) und (4) mehrere Male wiederholen.							
(5)	ABSTIMM PEGEL	(A) 1000(999)kHz 0 Hub 26 dBμ(ANT-Eingang)	—	1000(999)kHz	VR 2	Den Pegelwiderstand VR2 so einstellen, daß der FLI(TUNED)anzeiger nicht leuchtet. Dann der Pegelwiderstand aufdrehen, und den VR4 Halt geben wobei den FLI(TUNED)anzeiger leuchtet wird.	
(6)	ZF-UBERTRAGER	(D) 1000kHz 20dBμ(ANT-Eingang)	(B)	—	L13 (X14)	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	

ADJUSTMENT/REGLAGE/ABGLEICH



KR-A4010

VOLTAGE TABLE

X11-265X-XX

IC1

2	2.4V
3, 4	2.6V
5	-23V
7	4.8V(PHONE)
18	4.9V
21	4.8V
42	0V

IC2

O	-
I	5.5V
G	0V

	B	C	E
Q3, 4	5.4V	-22.7V	5.5V
Q5	4.8V(PHONO)	4.8V	4.1V(PHPNO)

X14-254X-XX

IC1

1 ~ 3	2.4V
4	0V
5 ~ 7	9.9V
8	4.2V
9	3.8V
10	3.3V
11	1.4V
12	1.5V
13, 14	0V
15	2.4V
16	1.4V
17 ~ 19	0V
20, 21	3.9V
22	2.8V

IC3

1	11.3V
2	2.5V
3	6V
4, 5	9.2V
6	3.8V
7	3.6V
9	11.2V
10, 11	2.6V
12 ~14	2.6V
15	4.4V
16	4.1V

IC4

4	11.9V
8	-12.3V

IC5

10	-12.4V
11	5.5V
19	12V

IC7

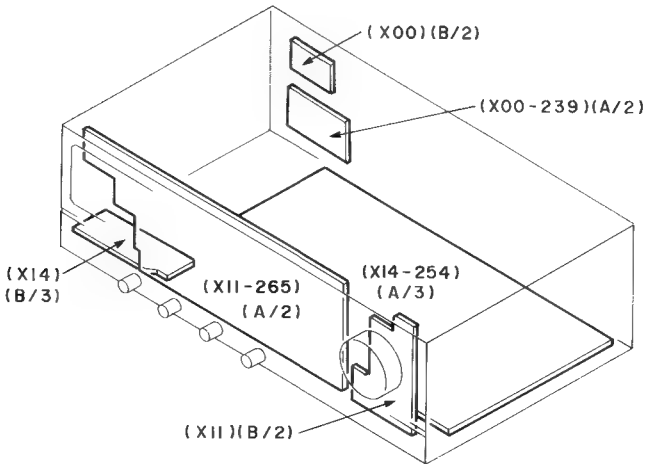
1 ~3	0V
4	-25.8V
5	-1.3V
6	3.9V
7	35V
8	-43.7V
9	-44.4V
10	0V
11	44V
12	42V
13	0V
14	-43.8V
15	-1.4V
16 ~18	0V

IC8

O	11.9V
I	21.8V
G	0V

	B	C	E
Q2	0V	10.7V	0V
Q3	4.5V	9.5V	3.8V
Q4	0.6V	-	-
Q6	2.6V	9.3V	1.8V
Q7	1.2V	2.5V	0.6V
Q8	0.6V	2.5V	-
Q10, 11	50μ : 0.2V 75μ : 0.6V	50μ : 0.3V 75μ : 0V	50μ : 0V 75μ : 0V
Q12	3.7V	0V	-
Q13	0V	11.9V	12V
Q14	0V	11.9V	-
Q15	11.9V	0.07V	12V
Q17, 18	-12.2V	0V	0V
Q19	4.9V	-	3.6V
Q20	-	0V	-0.4V
Q21	-12.3V	0V	-0.4V
Q22	4.9V	-0.4V	3.6V
Q25	0V	-19.7V	-6.2V
Q26	-44.1V	11V	-
Q27	44.1V	11V	-
Q29	-6V	-13V	0V
Q30	-13V	-42.4V	-12.4V
Q32	-	-	5.5V

	G	D	S
Q1	-	9.7V	-
Q5	5.8V	-	-



PC BOARD (COMPONENT SIDE VIEW)

(a) Bande edge (1) : 2.5V (FM)
1.5V (AM)
Bande edge (2) : 8.0V (FM, AM)



330KΩ

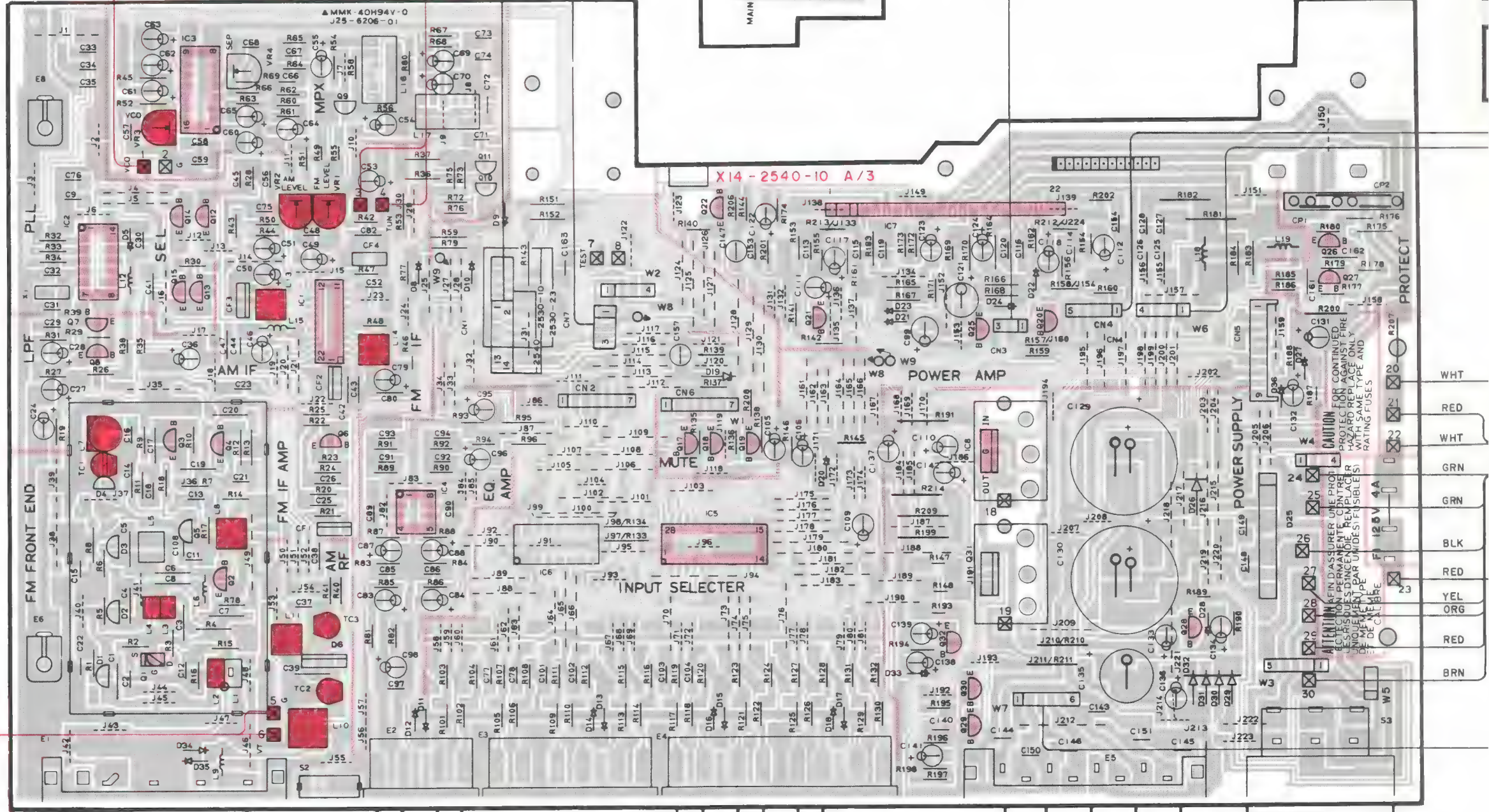
AC voltmeter

Frequency counter

DC voltmeter
(b) Discriminator : 0V



(c) VCO : 76.00kHz



ANTENNA

PHONO
INPUT

21

REC
PLAY
VIDEO/AUX
IN

TAPE

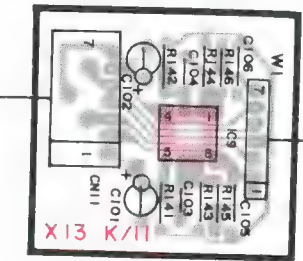
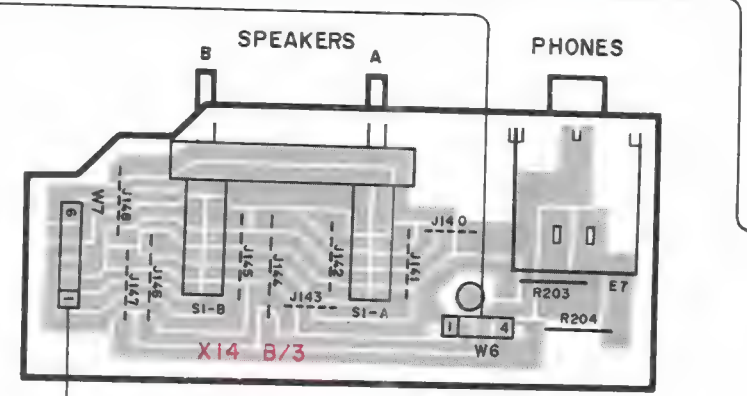
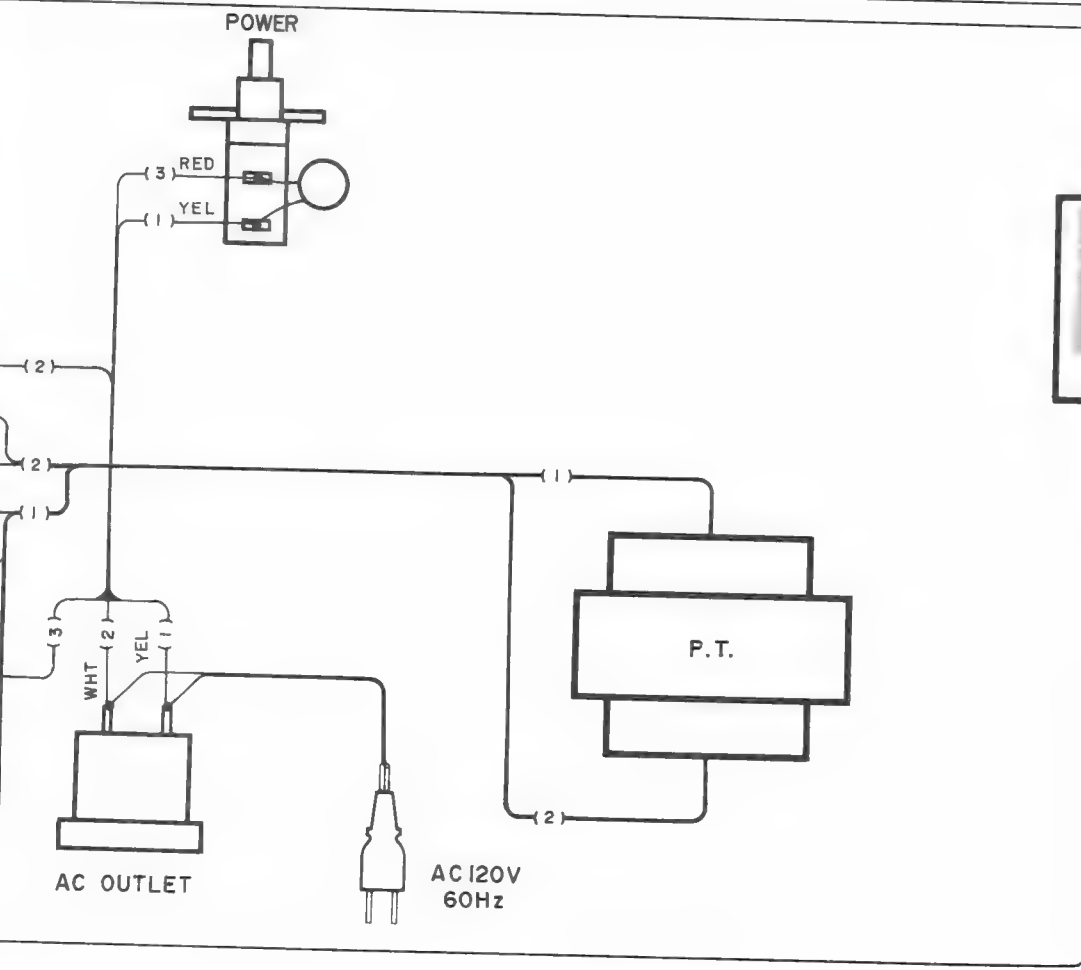
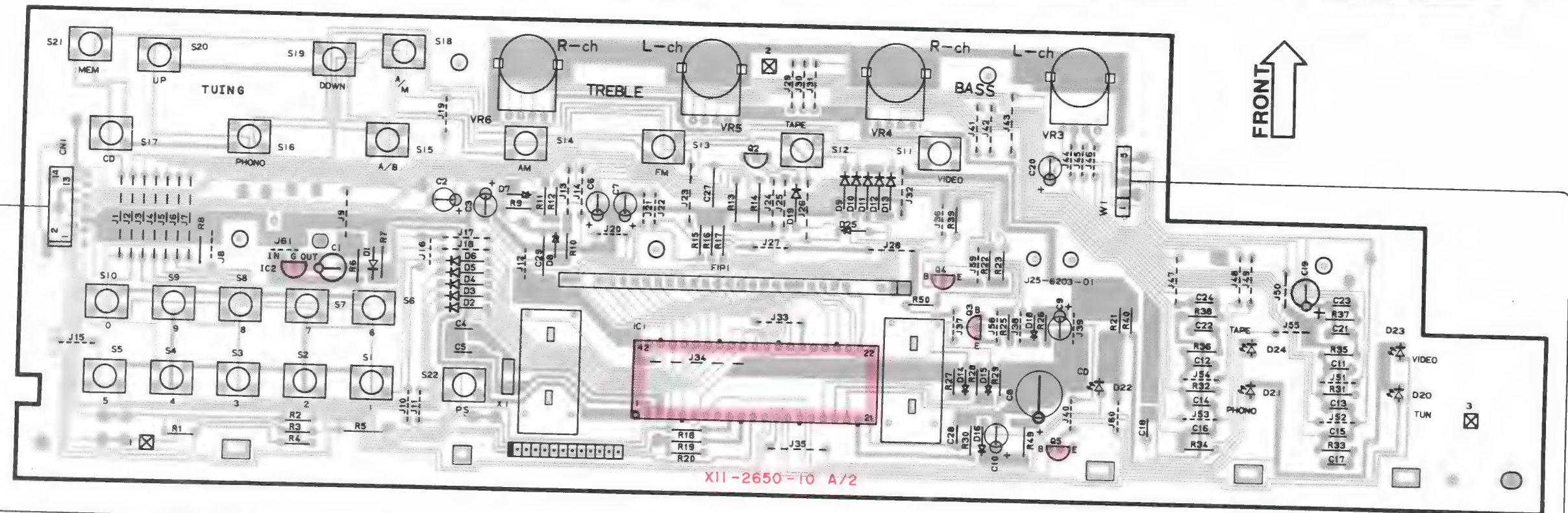
+ Rch - Lch +
SPEAKERS

IMPEDANCE
SELECTOR

22

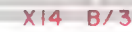
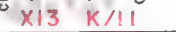
CAUTION: FOR CONTINUED PROTECTION OF THE PROTECTOR, THE PROTECTOR MUST BE REPLACED WITH THE SAME TYPE AND RATING FUSES.

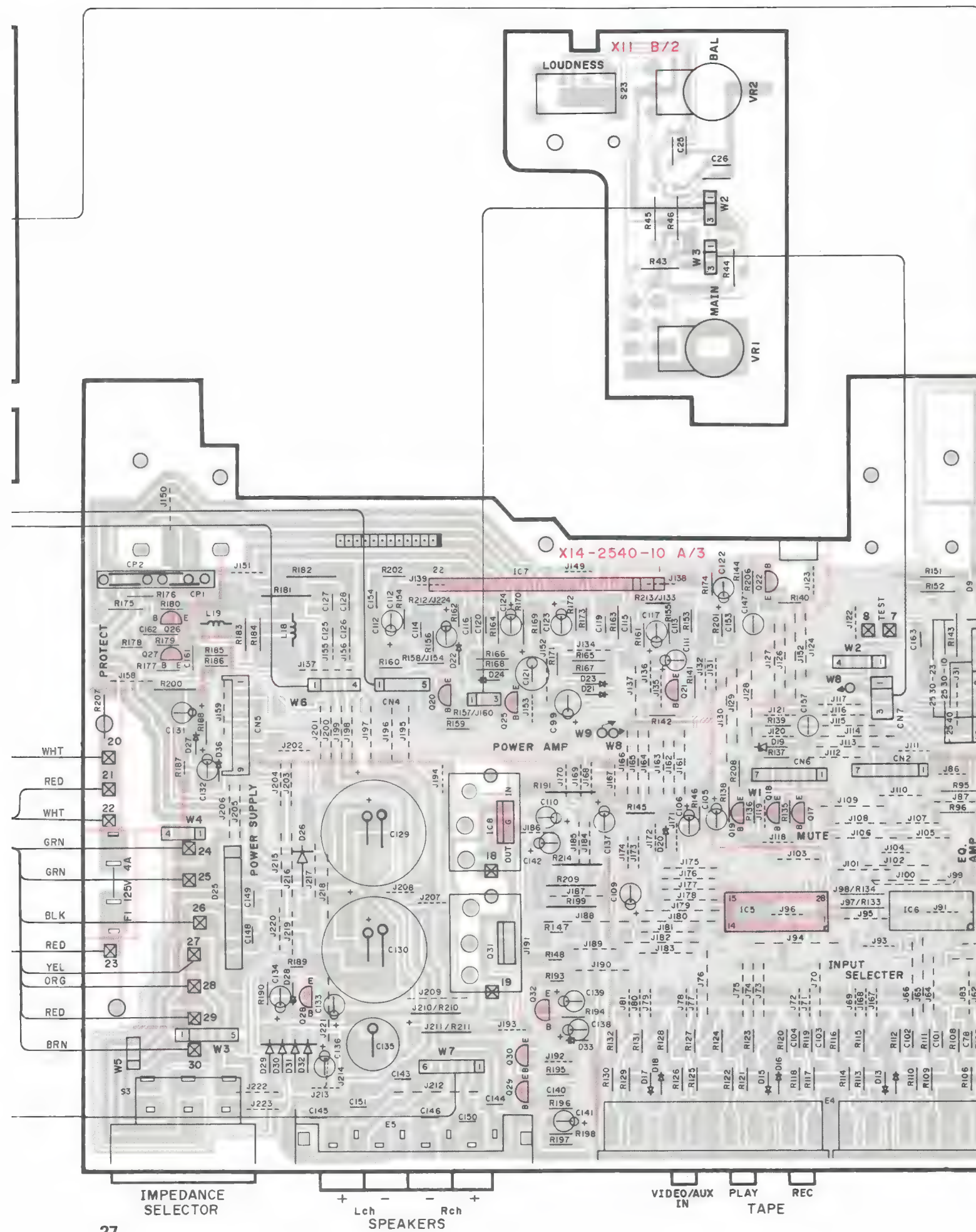
ATTENTION: POUR ASSURER UNE PROTECTION CONTINUE DU PROTECTOR, IL FAUT LE REMPLACER PAR UN AUTRE DU MÊME TYPE ET DE MÊME RATING FUSES.



Refer to the schematic diagram for the values of resistors and capacitors.

FRONT

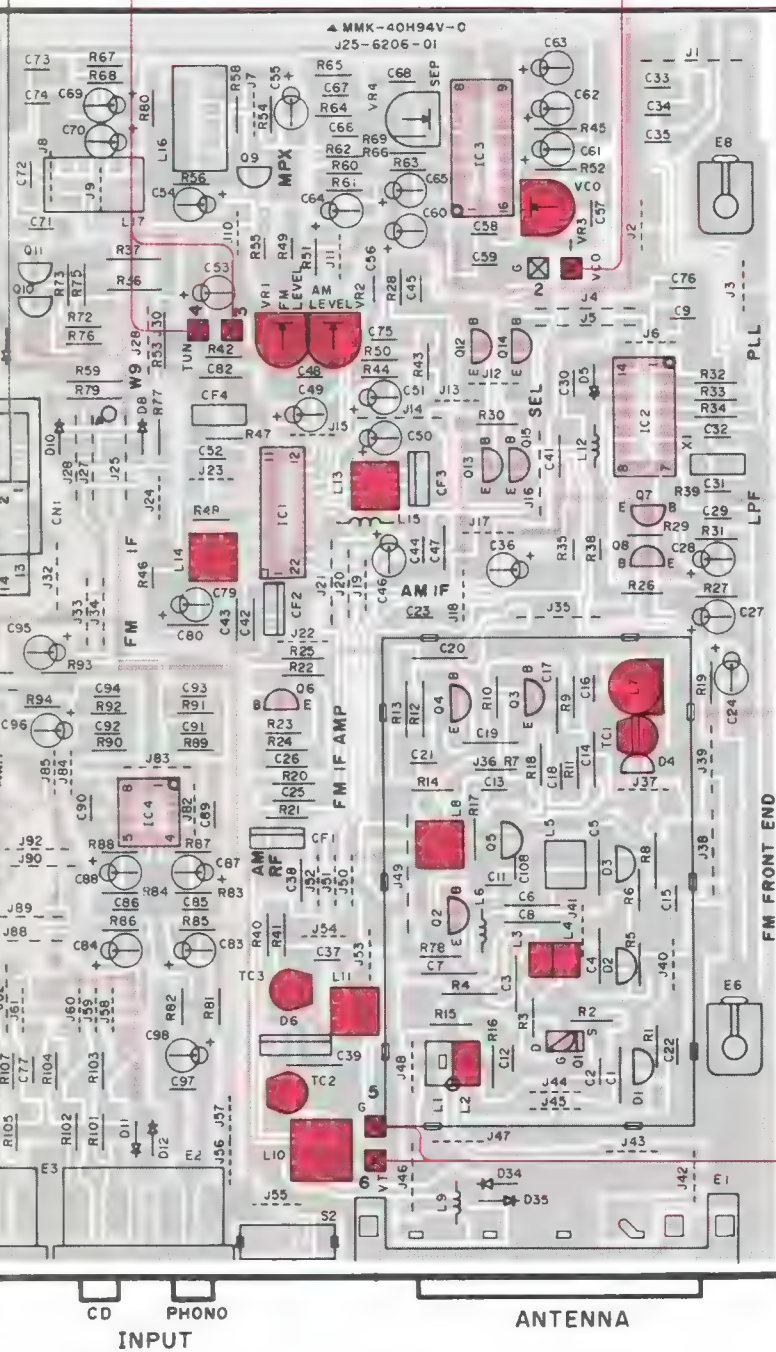
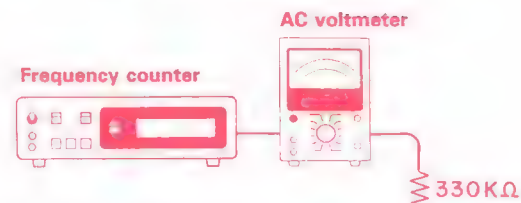




DC voltmeter
(b) Discriminator : 0V



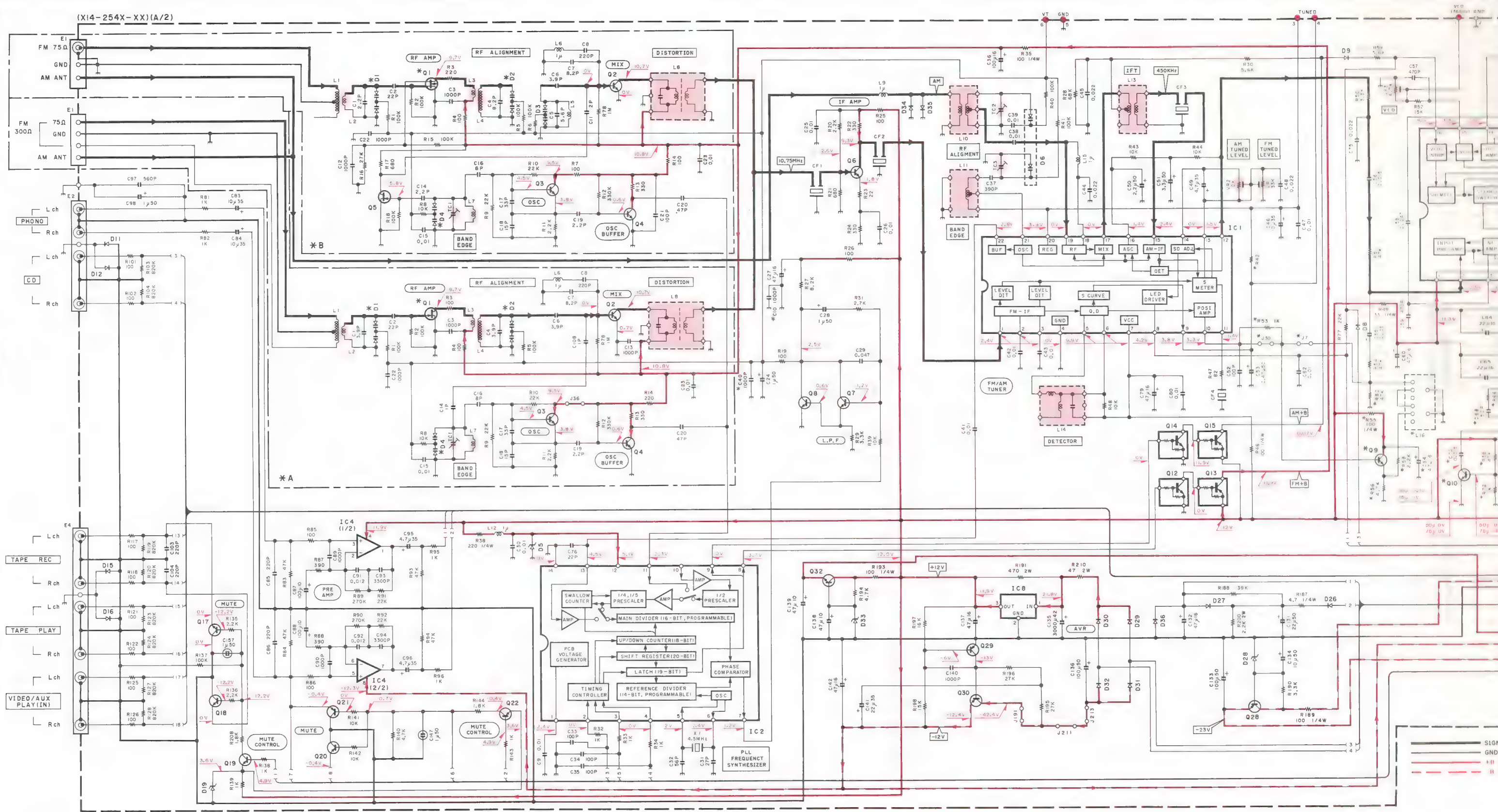
(c) VCO : 76.00kHz



(a) Bande edge (1) : 2.5V (FM)
1.5V (AM)
Bande edge (2) : 8.0V (FM, AM)



(X14-254X-XX)(A/2)



2SA733(A)
2SA954
2SA992
2SC1845
2SC1923
2SC2003
2SC2878
2SC945(A)

DTC124ES

DTA114ES
2SA933S
2SC1740S

2SK161
2SK241

μPC7812HF

3SK73

NJM4558D-A

CX-7925B

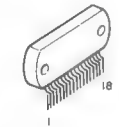
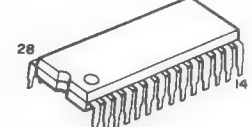
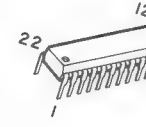
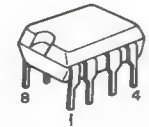
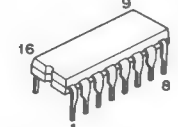
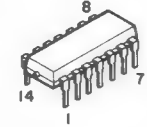
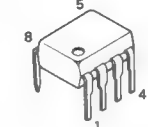
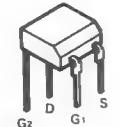
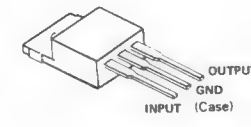
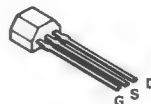
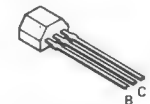
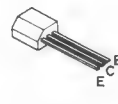
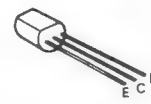
AN7470

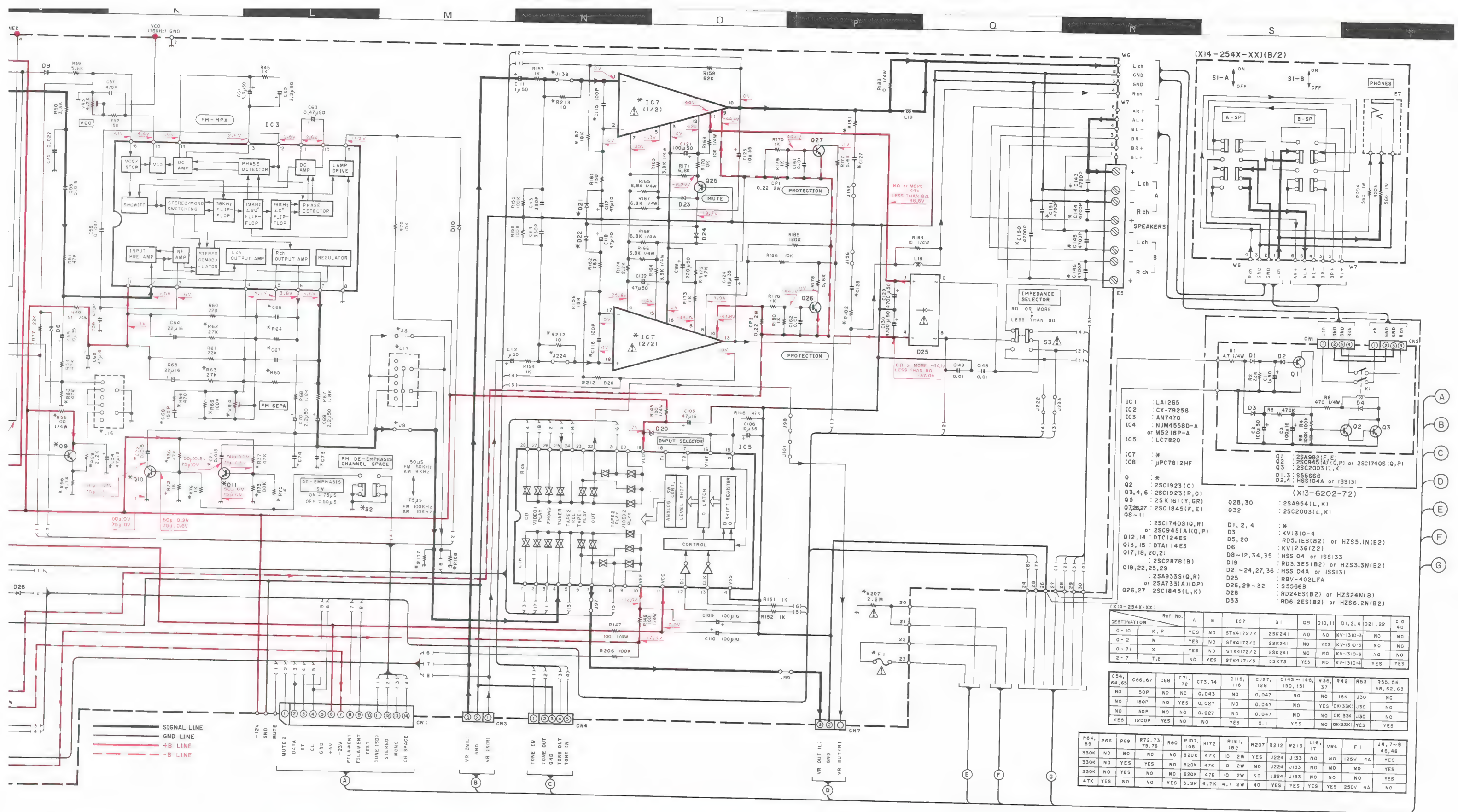
M5218P-A

LA1265

LC7820

STK4171/5
STK4172/2





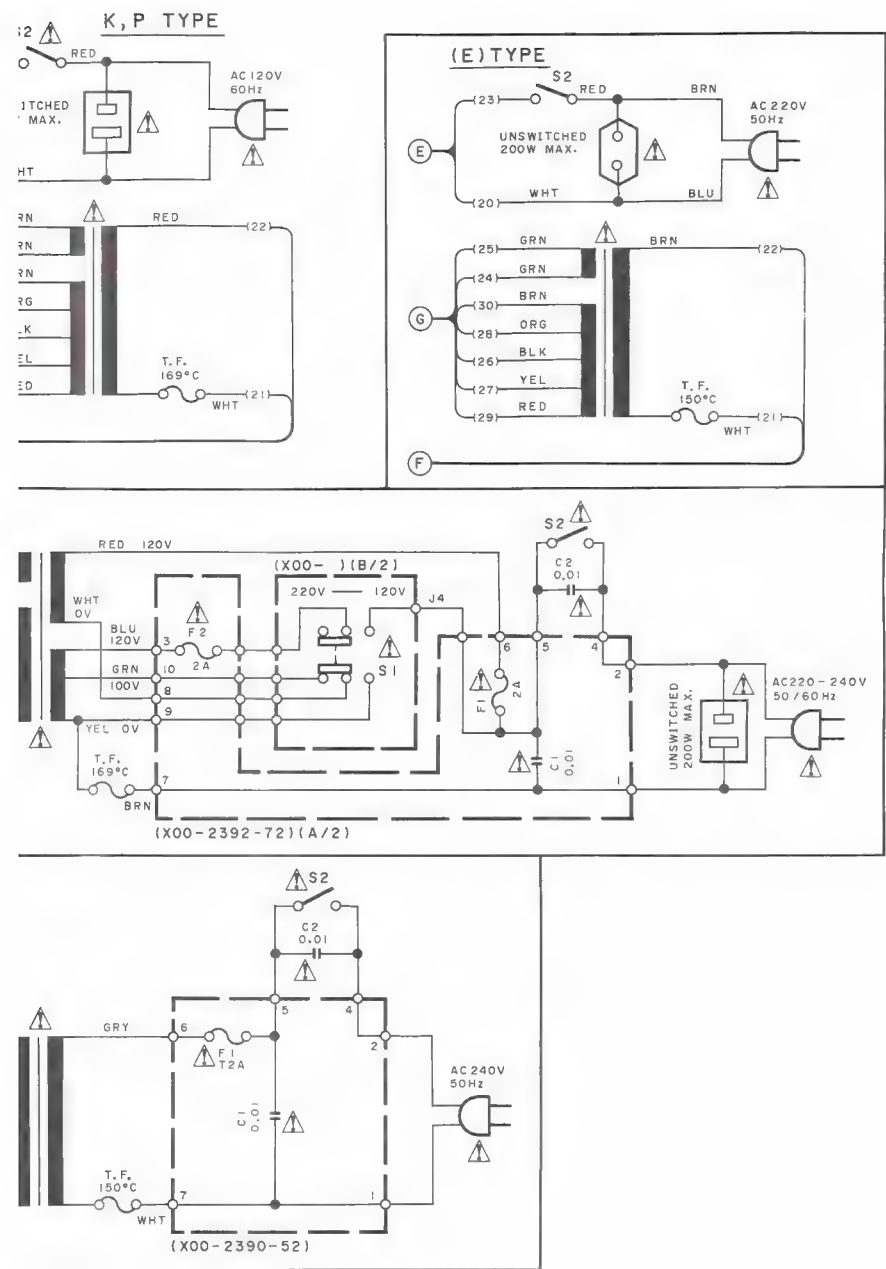
STK4171/5
STK4172/2

- DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.
- Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

- Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Voltmeter ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.

Y05-2430-20

KR-A4010
KENWOOD



7538AC-041
529C

1733(A)(Q,P) or 2SA933S(Q,R)
945(A)(Q,P) or 2SC1740S(Q,R)

25
133 or HSS104
5.2ES(B2) or HZS6.2N(B2)
OES(B2) or HZS10N(B2)
0-0431-05

8BRM7A

SIGNAL LINE
GND LINE
+B LINE
-B LINE

af. No.	Q2	D12	D19	J24	R13, 14
P	NO	NO	NO	NO	NO
	YES	NO	YES	YES	YES
E	NO	YES	NO	NO	NO

X11-265X-XX

IC1	
2	2.4V
3, 4	2.6V
5	-23V
7	4.8V(PHONE)
18	4.9V
21	4.8V
42	0V

IC2	
O	-
I	5.5V
G	0V

	B	C	E
Q3, 4	5.4V	-22.7V	5.5V
Q5	4.8V(PHONO)	4.8V	4.1V(PHONO)

X14-254X-XX

IC1	
1 ~ 3	2.4V
4	0V
5 ~ 7	9.9V
8	4.2V
9	3.8V
10	3.3V
11	1.4V
12	1.5V
13, 14	0V
15	2.4V
16	1.4V
17 ~ 19	0V
20, 21	3.9V
22	2.8V

IC3	
1	11.3V
2	2.5V
3	6V
4, 5	9.2V
6	3.8V
7	3.6V
9	11.2V
10, 11	2.6V
12 ~ 14	2.6V
15	4.4V
16	4.1V

IC4	
4	11.9V
8	-12.3V

IC2	
1	2.4V
2 ~ 4	0V
5	2v
6	2.4V
7	1.2V
8	3.7V
9	0V
11	2.3V
12	5.1V
13	4.5V
14	0V

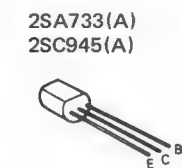
IC5	
10	-12.4V
11	5.5V
19	12V

IC7	
1 ~ 3	0V
4	-25.8V
5	-1.3V
6	3.9V
7	35V
8	-43.7V
9	-44.4V
10	0V
11	44V
12	42V
13	0V
14	-43.8V
15	-1.4V
16 ~ 18	0V

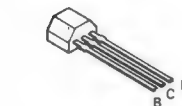
IC8	
O	11.9V
I	21.8V
G	0V

	B	C	E
Q2	0V	10.7V	0V
Q3	4.5V	9.5V	3.8V
Q4	0.6V	-	-
Q6	2.6V	9.3V	1.8V
Q7	1.2V	2.5V	0.6V
Q8	0.6V	2.5V	-
Q10, 11	50μ : 0.2V 75μ : 0.6V	50μ : 0.3V 75μ : 0V	50μ : 0V 75μ : 0V
Q12	3.7V	0V	-
Q13	0V	11.9V	12V
Q14	0V	11.9V	-
Q15	11.9V	0.07V	12V
Q17, 18	-12.2V	0V	0V
Q19	4.9V	-	3.6V
Q20	-	0V	-0.4V
Q21	-12.3V	0V	-0.4V
Q22	4.9V	-0.4V	3.6V
Q25	0V	-19.7V	-6.2V
Q26	-44.1V	11V	-
Q27	44.1V	11V	-
Q29	-6V	-13V	0V
Q30	-13V	-42.4V	-12.4V
Q32	-	-	5.5V

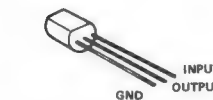
	G	D	S
Q1	-	9.7V	-
Q5	5.8V	-	-



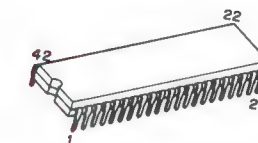
2SA933S
2SC1740S



PST529C



μPD7538AC-041



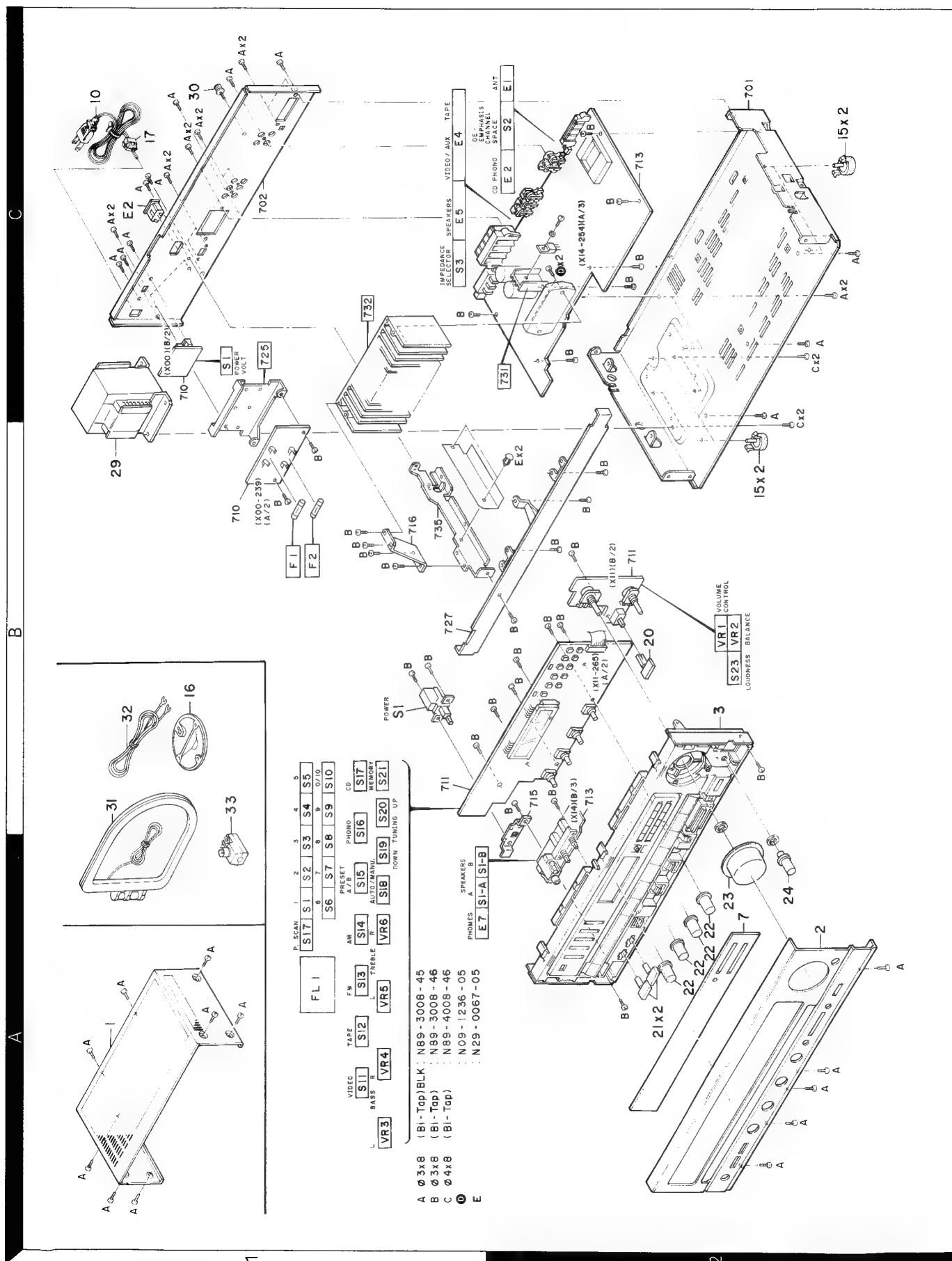
CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

- DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.
- Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.
- Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Voltmeter ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.

KR-A4010
KENWOOD

Y05-2430-20

EXPLODED VIEW



KR-A4010

PARTS LIST

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KR-A4010						
1	1A		A01-1746-01	METALLIC CABINET		
2	2A	*	A20-5775-12	PANEL	KPMX	
2	2A		A20-5804-12	PANEL	TE	
3	2B		A22-1086-01	SUB PANEL		
7	2A		B10-1006-03	FRONT GLASS		
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0096-13	WARRANTY CARD	X	
-			B46-0121-03	WARRANTY CARD	P	
-			B46-0122-13	WARRANTY CARD	E	
-			B46-0143-03	WARRANTY CARD	T	
-			B50-9491-00	INSTRUCTION MANUAL (ENG)	KPMXT	
-			B50-9492-00	INSTRUCTION MANUAL (FRE)	PME	
-			B50-9493-00	INSTRUCTION MANUAL (G/I/D)	E	
-			B50-9494-00	INSTRUCTION MANUAL (SPANISH)	M	
-			B58-0803-13	CAUTION CARD	E	
△ C2			C91-0647-05	CERAMIC 0.01UF P		
△ 10	1C		E30-0459-05	AC POWER CORD	E	
△ 10	1C		E30-0812-05	AC POWER CORD	M	
△ 10	1C		E30-1341-05	AC POWER CORD	X	
△ 10	1C		E30-1416-05	AC POWER CORD	T	
△ 10	1C		E30-2209-05	AC POWER CORD	KP	
△ E2	1C		E03-0041-05	AC OUTLET	KPM	
△ E2	1C		E03-0055-05	AC OUTLET	E	
△ E2	1C		E03-0085-05	AC OUTLET	T	
△ F1	1B		F06-2021-05	FUSE (SEMKO) (250V T2A)	X	
△ F1 , 2	1B		F04-2026-05	FUSE (250V 2A)	M	
-			H01-8450-04	ITEM CARTON CASE	KPMXE	
-			H01-8559-04	ITEM CARTON CASE	T	
-			H10-3798-02	POLYSTYRENE FOAMED FIXTURE		
-			H10-3799-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0181-04	PROTECTION BAG (150X260X0.05)		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
15	2B, 2C		JC2-1013-05	FOOT	KPMX	
15	2B, 2C		J02-1034-05	FOOT	TE	
16	1B		J19-2815-04	ANTENNA HOLDER		
△ 17	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
20	2B		K27-1725-04	KNOB (BUTTON) LOUDNESS		
21	2A		K27-1987-04	KNOB (BUTTON) SPEAKERS		
22	2A		K29-3598-04	KNOB (TONE)		
23	2A		K29-3597-04	KNOB (VOLUME)		
24	2A		K29-3632-04	KNOB (BALANCE)		
△ 29	1B		L01-7661-05	POWER TRANSFORMER	K	
△ 29	1B		L01-7662-15	POWER TRANSFORMER	E	
△ 29	1B		L01-7665-05	POWER TRANSFORMER	M	
△ 29	1B		L01-7667-05	POWER TRANSFORMER	P	
△ 29	1B		L01-7668-05	POWER TRANSFORMER	XT	
30	1C		N08-0128-35	BINDING POST (GND)		
A			N89-3008-45	BINDING HEAD TAPTITE SCREW		

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B C			N89-3008-46 N89-4008-45	BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW		
△ S2	1B		S40-1089-05	PUSH SWITCH (POWER)		
31	1B		T90-0174-05	LOOP ANTENNA		
32	1B		T90-0175-05	T TYPE ANTENNA		
33	1B		T90-0177-05	ANTENNA ADAPTOR	TE	
POWER SUPPLY (X00-239X-XX) 2-72 : M 0-52 : X						
△ C1			C91-0647-05	CERAMIC 0.01UF P	MX	
-			J13-0054-05	FUSE CLIP	MX	
-			J61-0307-05	WIRE BAND	M	
△ S1	1C		S31-2126-05	SLIDE SWITCH (POWER VOLTAGE)	M	
CONTROL UNIT (X11-265X-XX) 0-10 : K, P 0-21 : M 2-71 : X, T, E						
D20 -24			B30-0431-05	LED(LN21CPH)		
C1			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C2			CE04LW1H100M	ELECTRO 10UF 50WV		
C3			CE04LW1E330M	ELECTRO 33UF 25WV		
C4 ,5			CC45FSL1H331J	CERAMIC 330PF J		
C6 ,7			CE04LW1H4R7M	ELECTRO 4.7UF 50WV		
C8			C91-0937-05	BACKUP 0.047F 5.5WV		
C9			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C10			CE04LW1A101M	ELECTRO 100UF 10WV		
C11 ,12			CF92FV1H022J	MF 8200PF J		
C13 ,14			CC45FSL1H220J	CERAMIC 22PF J		
C15 ,16			CC45FSL1H101J	CERAMIC 100PF J		
C17 ,18			CF92FV1H333J	MF 0.033UF J		
C19 ,20			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C21 ,22			CF92FV1H153J	MF 0.015UF J		
C23 ,24			CF92FV1H603J	MF 0.068UF J		
C25 ,26			CF92FV1H333J	MF 0.033UF J		
C27			C91-0769-05	CERAMIC 0.01UF M		
C28			CK45FF1H103Z	CERAMIC 0.010UF Z		
C29			C91-0769-05	CERAMIC 0.01UF M		
X1			L78-0202-05	RESONATOR (400KHZ)		
VR1	2B		R06-5175-05	POTENTIOMETER100K(B) (VOLUME)		
VR2	2B		R01-5067-05	POTENTIOMETER100K (BALANCE)		
VR3 -6	1A		R05-5027-05	POTENTIOMETER100K(C) (TONE)		
S1 -22	1A,1B		S40-1064-05	PUSH SWITCH (SELECTOR)		
S23	2B		S40-2351-05	PUSH SWITCH (LOUDNESS)		
D1 -6			HSS104	DIODE		
D1 -6			1SS133	DIODE		
D7			HZS6.2N(B2)	ZENER DIODE		
D7			RD6.2ES(B2)	ZENER DIODE		
D8			HZS10N(B2)	ZENER DIODE		
D8			RD10ES(B2)	ZENER DIODE		
D9 -11			HSS104	DIODE	KPM	
D9 -11			1SS133	DIODE	KPM	
D9 -16			HSS104	DIODE	XTE	
D9 -16			1SS133	DIODE	XTE	
D13 -16			HSS104	DIODE	KPM	

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D13 -16 D18 D18 D18 ,19 D18 ,19			1SS133 HSS104 1SS133 HSS104 1SS133	DIODE DIODE DIODE DIODE DIODE	KPM KPxTE KPxTE M M	
D25 D25 FL1 IC1 IC2			HSS104 1SS133 FIP8BRM7A UPD7538AC-041 PST529C	DIODE DIODE FLUORESCENT INDICATOR TUBE IC(MICROPROCESSOR) IC(SYSTEM RESET)		
Q2 -4 Q2 -4 Q3 ,4 Q3 ,4 Q5			2SA733(A)(Q,P) 2SA933S(Q,R) 2SA733(A)(Q,P) 2SA933S(Q/R) 2SC1740S(Q/R)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	M M KPxTE KPxTE	
Q5			2SC945(A)(Q,P)	TRANSISTOR		
SWITCH UNIT (X13-6202-72) : T, E						
C1 C2 C3			CE04LW1H010M CE04LW1H101M CE04LW1C101M	ELECTRO 1.0UF 50WV ELECTRO 100UF 50WV ELECTRO 100UF 16WV	TE TE TE	
CN1 ,2			E10-0408-05	FLAT CABLE CONNECTOR	TE	
R1 R6			RD14GB2E4R7J RD14GB2E471J	FL-PROOF RD 4.7 J 1/4W FL-PROOF RD 470 J 1/4W	TE TE	
K1			S51-2078-05	MAGNETIC RELAY	TE	
D1 D2 D2 D3 D4			S5566B HSS104A 1SS131 S5566B HSS104A	DIODE DIODE DIODE DIODE DIODE	TE TE TE TE TE	
D4 Q1 Q2 Q2 Q3			1SS131 2SA992(F,E) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SC2003(L,K)	DIODE TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	TE TE TE TE TE	
RECEIVER UNIT (X14-254X-XX) 0-10 : K, P 0-21 : M 0-71 : X 2-71 : T, E						
C1 C1 C2 C3 C4			C91-0713-05 C91-0716-05 CC45FSL1H220J C91-0757-05 C91-0716-05	CERAMIC 2.2PF K CERAMIC 3.9PF K CERAMIC 22PF J CERAMIC 1000PF K CERAMIC 3.9PF K	TE KPMX KPMX	
C4 C5 C6 C7 C8			C91-0720-05 C91-0718-05 C91-0716-05 C91-0720-05 C91-0749-05	CERAMIC 8.2PF K CERAMIC 5.6PF K CERAMIC 3.9PF K CERAMIC 8.2PF K CERAMIC 220PF K	TE TE 	
C9 C10 C11 C12 C13			CK45FF1H103Z CK45FB1H102K CC45FSL1H020C CK45FB1H102K CK45FB1H102K	CERAMIC 0.010UF Z CERAMIC 1000PF K CERAMIC 2.0PF C CERAMIC 1000PF K CERAMIC 1000PF K	 TE TE TE KPMX	
C14 C14			C91-0709-05 C91-0713-05	CERAMIC 1PF M CERAMIC 2.2PF K	KPMX TE	

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C15			CK45FF1H103Z	CERAMIC 0.010UF Z		
C16			CC45FUJ1H080D	CERAMIC 8.0PF D		
C17			C91-0733-05	CERAMIC 33PF J		
C18			CC45FSL1H150J	CERAMIC 15PF J		
C19			C91-0713-05	CERAMIC 2.2PF K		
C20			C91-0737-05	CERAMIC 47PF J	TE	
C21			CC45FSL1H101J	CERAMIC 100PF J		
C22			CK45FB1H102K	CERAMIC 1000PF K		
C23			CK45FF1H103Z	CERAMIC 0.010UF Z		
C24			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C25 ,26			C91-0769-05	CERAMIC 0.01UF M		
C27			CE04LW1C470M	ELECTRO 47UF 16WV		
C28			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C29			CF92FV1H473J	MF 0.047UF J		
C30			CK45FF1H103Z	CERAMIC 0.010UF Z		
C31			CC45FCH1H270J	CERAMIC 27PF J		
C32			CC45FCH1H560J	CERAMIC 56PF J		
C33 -35			CC45FSL1H101J	CERAMIC 100PF J		
C36			CE04LW1C101M	ELECTRO 100UF 16WV		
C37			CC93FCH1H391J	CERAMIC 390PF J		
C38 ,39			C91-0769-05	CERAMIC 0.01UF M	TE	
C40			CK45FB1H102K	CERAMIC 1000PF K		
C41 -43			C91-0769-05	CERAMIC 0.01UF M		
C44 ,45			CK45FF1H223Z	CERAMIC 0.022UF Z		
C46			CE04LW1V100M	ELECTRO 10UF 35WV		
C47			C91-0769-05	CERAMIC 0.01UF M		
C48			CK45FF1H223Z	CERAMIC 0.022UF Z		
C49			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C50			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C51			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		
C52			CC45FSL1H101J	CERAMIC 100PF J	TE	
C53			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C54			CE04LW1C470M	ELECTRO 47UF 16WV		
C55			CE04LW1V100M	ELECTRO 10UF 35WV		
C56			CF92FV1H153J	MF 0.015UF J		
C57			CC93FCH1H471J	CERAMIC 470PF J		
C58			CF92FV1H473J	MF 0.047UF J		
C59			CK45FB1H471K	CERAMIC 470PF K		
C60			CE04LW1C470M	ELECTRO 47UF 16WV		
C61			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		
C62			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C63			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C64 ,65			CE04LW1C220M	ELECTRO 22UF 16WV	TE	
C66 ,67			CC45FSL1H151J	CERAMIC 150PF J	KPMX	
C66 ,67			CF92FV1H122J	MF 1200PF J	TE	
C68			CC45FSL1H151J	CERAMIC 150PF J	TE	
C69 ,70			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C71 ,72			CF92FV1H153J	MF 0.015UF J	M	
C73 ,74			CF92FV1H273J	MF 0.027UF J	MX	
C73 ,74			CF92FV1H433J	MF 0.043UF J	KP	
C75			CK45FF1H223Z	CERAMIC 0.022UF Z		
C76			CC45FSL1H220J	CERAMIC 22PF J		
C79			CE04LW1C470M	ELECTRO 47UF 16WV		
C80			C91-0769-05	CERAMIC 0.01UF M		
C82			C91-0769-05	CERAMIC 0.01UF M		

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KR-A4010

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C83 ,84 C85 ,86 C87 ,88 C89 ,90 C91 ,92			CE04LW1V100M CC45FSL1H221J CE04LW1A101M CK45FB1H102K CF92FV1H123J	ELECTRO 10UF 35WV CERAMIC 220PF J ELECTRO 100UF 10WV CERAMIC 1000PF K MF 0.012UF J		
C93 ,94 C95 ,96 C97 C98 C99		*	CF92FV1H332J CE04LW1V4R7M CK45FB1H561K CE04LW1H010M CE04LW1H221M	MF 3300PF J ELECTRO 4.7UF 35WV CERAMIC 560PF K ELECTRO 1.0UF 50WV ELECTRO 220UF 50WV	KPMX	
C99 C103,104 C105 C106 C108			CE04LW1H470M CC45FSL1H221J CE04LW1C470M CE04LW1V100M C91-0709-05	ELECTRO 47UF 50WV CERAMIC 220PF J ELECTRO 47UF 16WV ELECTRO 10UF 35WV CERAMIC 1PF M	TE KPMX	
C109 C110 C111,112 C113,114 C115,116			CE04LW1C101M CE04LW1A101M CE04LW1H010M CC45FSL1H331J CC45FSL1H101J	ELECTRO 100UF 16WV ELECTRO 100UF 10WV ELECTRO 1.0UF 50WV CERAMIC 330PF J CERAMIC 100PF J	TE	
C117,118 C119,120 C121 C122 C123,124			CE04LW1A470M CC45FSL1H100D CE04LW1H101M CE04LW1H470M CE04LW1V100M	ELECTRO 47UF 10WV CERAMIC 10PF D ELECTRO 100UF 50WV ELECTRO 47UF 50WV ELECTRO 10UF 35WV	TE	
C127,128 C127,128 C129,130 C131 C132			CF92FV1H104J CF92FV1H473J C90-1780-05 CE04LW1H220M CE04LW1C470M	MF 0.10UF J MF 0.047UF J ELECTRO 4700UF 50WV ELECTRO 22UF 50WV ELECTRO 47UF 16WV	TE KPMX	
C133 C134 C135 C136 C137		*	CE04LW1H101M CE04LW1H100M C90-1781-05 CE04LW1H101M CE04LW1C470M	ELECTRO 100UF 50WV ELECTRO 10UF 50WV ELECTRO 3300UF 50WV ELECTRO 100UF 50WV ELECTRO 47UF 16WV		
C138,139 C140 C141 C142 C143-146			CE04LW1A470M CK45FB1H102K CE04LW1V220M CE04LW1C470M CK45FF1H472Z	ELECTRO 47UF 10WV CERAMIC 1000PF K ELECTRO 22UF 35WV ELECTRO 47UF 16WV CERAMIC 4700PF Z	TE	
C147 C148,149 C150,151 C157 C161,162			C90-1349-05 CK45FF1H103Z CK45FF1H472Z C90-1349-05 C91-0769-05	NP-ELEC 1UF 50WV CERAMIC 0.010UF Z CERAMIC 4700PF Z NP-ELEC 1UF 50WV CERAMIC 0.01UF M	TE	
TC1 TC2 ,3			C05-0302-05 C05-0303-05	CERAMIC TRIMMER CAPACITOR(11PF CERAMIC TRIMMER CAPACITOR(20PF		
CN4 CN7 E1 E1 E2	2C 2C 2C		E10-0509-05 E10-0308-05 E20-0321-05 E20-0476-05 E13-0446-05	FLAT CABLE CONNECTOR FLAT CABLE CONNECTOR LOCK TERMINAL BOARD LOCK TERMINAL BOARD PHONE JACK (4P)	TE KPMX	
E4 E5	1C 1C		E13-0621-05 E20-0823-05	PHONE JACK (6P) TERMINAL BOARD(8P) SPEAKERS		

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E7	1A		E11-0162-05	PHONE JACK (3P)		
△ F1	1B		F05-4028-05	FUSE (UL)	KP	
△ F1	1B		F06-2021-05	FUSE (SEMΚ) (250V T2A)	TE	
-			J13-0054-05	FUSE CLIP	KPTE	
CF1 ,2			L72-0531-05	CERAMIC FILTER	KPMX	
CF1 ,2			L72-0536-05	CERAMIC FILTER	TE	
CF3			L72-0099-05	CERAMIC FILTER		
CF4			L72-0096-05	CERAMIC FILTER		
L1			L31-0594-05	FM-RF COIL		
L2			L31-0520-05	FM-RF COIL		
L3			L31-0580-05	FM-RF COIL		
L4			L31-0579-05	FM-RF COIL	KPMX	
L4 ,5			L31-0579-05	FM-RF COIL	TE	
L6			L40-1092-17	SMALL FIXED INDUCTOR(1UH,M)		
L7			L32-0318-05	FM OSCILLATING COIL		
L8			L30-0427-15	FM IFT		
L9			L40-1092-17	SMALL FIXED INDUCTOR(1UH,M)		
L10			L31-0509-05	MW-RF COIL		
L11			L32-0277-15	MW OSCILLATING COIL		
L12			L40-1092-17	SMALL FIXED INDUCTOR(1UH,M)		
L13			L30-0362-05	AM IFT		
L14			L30-0439-15	FM IFT		
L15			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)		
L16			L79-0125-05	LC FILTER	TE	
L17			L79-0739-05	LC FILTER	TE	
L18 ,19			L39-0085-05	PHASE-COMPENSATION COIL		
X1			L77-0573-05	CRYSTAL RESONATOR(4.5MHZ)		
D	2C		N09-1236-05	TAPPING SCREW (3X16)		
E			N29-0067-05	PUSH RIVET (3.5X4.5)		
CP1 ,2			R92-0166-05	METAL-PLATE 0.22 K 2W		
R35			RD14NB2E101J	RD 100 J 1/4W		
R38			RD14NB2E221J	RD 220 J 1/4W		
R46			RD14NB2E101J	RD 100 J 1/4W		
R49			RD14NB2E330J	RD 33 J 1/4W		
R55			RD14NB2E101J	RD 100 J 1/4W	TE	
R145			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
R147,148			RD14NB2E101J	RD 100 J 1/4W		
R169			RD14NB2E101J	RD 100 J 1/4W		
R181,182			RS14KB3D100J	FL-PROOF RS 10 J 2W	KPMX	
R181,182			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W	TE	
R187			RD14NB2E4R7J	RD 4.7 J 1/4W		
R189			RD14NB2E101J	RD 100 J 1/4W		
R191			RS14KB3D471J	FL-PROOF RS 470 J 2W		
R193			RD14NB2E101J	RD 100 J 1/4W		
R200			RS14KB3D222J	FL-PROOF RS 2.2K J 2W		
R203,204			RS14KB3A561J	FL-PROOF RS 560 J 1W		
R207			R92-0173-05	RC 2.2M M 1/2W	KP	
R210			RS14KB3D470J	FL-PROOF RS 47 J 2W		
VR1			R12-3130-05	TRIMMING POT.(33K) FM TUNE		
VR2			R12-3126-05	TRIMMING POT.(10K) AM TUNE		
VR3			R12-1089-05	TRIMMING POT.(4.7K) VCO		
VR4			R12-5060-05	TRIMMING POT.(220K) FM SEPA	TE	

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PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
S1	1A		S42-2170-05	MULTIPLE PUSH SWITCH (SPEAKERS)		
S2	2C		S31-2132-05	SLIDE SWITCH (ENPHA/CH-SPACE)	M	
S3	1C		S31-2136-05	SLIDE SWITCH (IMPEDANCE)		
D1 -4			KV1310-4	VARIABLE CAPACITANCE DIODE	TE	
D1 ,2			KV1310-3	VARIABLE CAPACITANCE DIODE	KPMX	
D4			KV1310-3	VARIABLE CAPACITANCE DIODE	KPMX	
D5			HZS5.1N(B2)	ZENER DIODE		
D5			RD5.1ES(B2)	ZENER DIODE		
D6			KV1236(Z2)	VARIABLE CAPACITANCE DIODE		
D8 -12			HSS104	DIODE		
D8 -12			1SS133	DIODE		
D19			HZS3.3N(B)	ZENER DIODE		
D19			RD3.3ES(B)	ZENER DIODE		
D20			HZS5.1N(B2)	ZENER DIODE		
D20			RD5.1ES(B2)	ZENER DIODE		
D21 -24			HSS104A	DIODE	TE	
D21 -24			1SS131	DIODE	TE	
D23 ,24			HSS104A	DIODE	KPMX	
D23 ,24			1SS131	DIODE		
D25			RBV-402LFA	DIODE		
D26			S5566B	DIODE		
D27			HSS104A	DIODE		
D27			1SS131	DIODE		
D28			HZS24N(B)	ZENER DIODE		
D28			RD24ES(B)	ZENER DIODE		
D29 -32			S5566B	DIODE		
D33			HZS6.2N(B2)	ZENER DIODE		
D33			RD6.2ES(B2)	ZENER DIODE		
D34 ,35			HSS104	DIODE		
D34 ,35			1SS133	DIODE		
D36			HSS104A	DIODE		
D36			1SS131	DIODE		
IC1			LA1265	IC(FM/AM TUNER)		
IC2			CX-7925B	IC(DIGITAL SELECT PLL)		
IC3			AN7470	IC(FM MPX)		
IC4			M5218P-A	IC(OP AMP X2)		
IC4			NJM4558D-A	IC(OP AMP X2)		
IC5			LC7820	IC(ELECTRO CONTROL SWITCH)		
△ IC7			STK-4171/5	IC(AF POWER AMP/ 40W X2)	TE	
△ IC7			STK4172/2	IC(AF POWER AMP/ 45W X2)	KPMX	
IC8			UPC7812HF	IC(VOLTAGE REGULATOR/ +12V)		
Q1			2SK241(Y)	FET	KPMX	
Q1			3SK73(GR)	FET	TE	
Q2			2SC1923(O)	TRANSISTOR		
Q3 ,4			2SC1923(R,O)	TRANSISTOR		
Q5			2SK161(Y,GR)	FET	TE	
Q6			2SC1923(R,O)	TRANSISTOR		
Q7			2SC1845(F,E)	TRANSISTOR		
Q8			2SC1740S(Q,R)	TRANSISTOR	KPMX	
Q8			2SC945(A)(Q,P)	TRANSISTOR	KPMX	
Q8 ,9			2SC1740S(Q,R)	TRANSISTOR	TE	
Q8 ,9			2SC945(A)(Q,P)	TRANSISTOR	TE	
Q10 ,11			2SC1740S(Q,R)	TRANSISTOR	M	
Q10 ,11			2SC945(A)(Q,P)	TRANSISTOR	M	

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KR-A4010 KR-A4010

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Ref. No.	Address	New Parts	Parts No.	Description	Desti-nation	Re-marks
参照番号	位 置	新	部 品 番 号	部 品 名 / 規 格	仕 向	備考
Q12			DTC124ES	DIGITAL TRANSISTOR		
Q13			DTA114ES	DIGITAL TRANSISTOR		
Q14			DTC124ES	DIGITAL TRANSISTOR		
Q15			DTA114ES	DIGITAL TRANSISTOR		
Q17 ,18			2SC2878(B)	TRANSISTOR		
Q19			2SA733(A)(Q,P)	TRANSISTOR		
Q19			2SA933S(Q,R)	TRANSISTOR		
Q20 ,21			2SC2878(B)	TRANSISTOR		
Q22			2SA733(A)(Q,P)	TRANSISTOR		
Q22			2SA933S(Q,R)	TRANSISTOR		
Q25			2SA733(A)(Q,P)	TRANSISTOR		
Q25			2SA933S(Q,R)	TRANSISTOR		
Q26 ,27			2SC1845(F,E)	TRANSISTOR		
Q28			2SA954(L,K)	TRANSISTOR		
Q29			2SA733(A)(Q,P)	TRANSISTOR		
Q29			2SA933S(Q,R)	TRANSISTOR		
Q30			2SA954(L,K)	TRANSISTOR		
Q32			2SC2003(L,K)	TRANSISTOR		

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SPECIFICATIONS

AUDIO SECITON

Rated Power Output (Except for Europe and U.K.)

45 watts per channel minimum RMS, both cahnnels driven at 8 ohms, from 40 Hz 20,000 Hz with no more than 0.5% total harmonic distortion. (FTC)

Maximum continuous output power (For Europe and U.K.) (IEC) from 63 Hz to 12,500 Hz 0.7% T.H.D.
at 8 ohms 45 W + 45 W
(DIN) 1,000 Hz at 4 ohms 45 W + 45 W
Total Harmonic Distortion (1 kHz 8 ohms) 0.1%
Input Sensitivity/Impedance
PHONO (MM) 2.5 mV/47 kohms
CD, TAPE, VIDEO 150 mV/47 kohms
Frequency Response
CD, TAPE, VIDEO 10 Hz - 70 kHz +0 dB -3 dB

Signal-to-Noise Ratio (IHF-A)
PHONO (MM) 70 dB
CD, TAPE, VIDEO 95 dB
Tone Control BASS ±10 dB at 100 Hz
TREBLE ±10 dB at 10 kHz

FM TUNER SECTION

Tuning Frequency Range 87.5 MHz - 108 MHz
Antenna Impedance 300 ohms balanced & 75 ohms unbalanced
Sensitivity
IHF 11.2 dBf (2.0 µV at 300 ohms)
DIN (MONO) 0.9 µV
(STEREO) 25 µV
Signal-to-Noise Ratio at 65 dBf (IHF)
Mono 78 dB
Stereo 72 dB
Total Harmonic Distortion at 1,000 Hz
Mono 0.2%
Stereo 0.3%
Frequencyresponse 30 Hz to 15 kHz +1.0 dB -2.5 dB
Stereo Separation 40 dB at 1 kHz

Note :
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

AM TUNER SECTION

Tuning Range
530 kHz - 1,610 kHz
(with the AM tuning interval set at 10 kHz)
531 kHz - 1,602 kHz
(with AM tuning interval set at 9 kHz)
Usable Sensitiviey 10 µV (320 µV/m)
Signal-to-Noise Ratio 50 dB
Total Harmonic Distortion 0.45%
Selectivity 25 dB

GENERAL

Power Consumption 1.9A...USA and Canada
Model/140 W...Others
Dimensions
U.S.A., Canada &
Other countries Model W: 440 (17-5/16")
H: 133 (5-1/4")
D: 284 (11-3/16")
U.K. & Europe Model W: 440
H: 138
D: 284
Weight (Net) 5.5 kg (12.1 lb)

Note:
KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

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